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TOMORROW¹

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IS TOMORROW more important than today? How much control have we over either? How are both affected by yesterday? How much ought we to think about each? Do librarians differ in this respect from the rest of the world? Is an occasional glance at the past a futile worship of antiquarianism?

All fair enough as questions but certainly not for final decision here or now. They may, however, serve to suggest that dreaming about the future is not necessarily wasteful and that a prudent man frequently checks yesterday with today for a view of tomorrow.

Readers, every librarian will agree, are now much keener for help in social and technical problems than they were a generation ago. Dogmatic theology, dominant until the fifties, has lost its rank. How long before our children will look at our present-day interest in social and economic theory and practice with the same detachment we now give to studies of the Pelagian or Sabellian heresies?

Our books have had much the same shapes, forms—almost the same sizes—for five hundred years. How long before they

¹ Part of a paper on library development given before the Harvard Library Club, February 17, 1936.

change radically as to method of manufacture, form, size, use?

I am not daring enough to fix that date, but I am sure it will face us sooner or later, sure that the librarian today cannot afford to neglect thinking about the librarian of yesterday or tomorrow. Library work is a trilogy of people, books, equipment; and the people in the book world divide themselves again into the three groups of author, reader, librarian—the latter serving as connecting agent.

The author is not in question here. He will undoubtedly write books in the future as he has in the past, partly because he cannot help it, partly because his friends or his publishers (implying there, of course, no antagonistic grouping) urge him. The reader is certainly playing a larger part in the interest of the librarian now than he has in the past. An attention is today given to his needs both in the writing and in the manufacturing of books far beyond that of a generation ago. No doubt his needs were recognized in those earlier years; perhaps the chief change today is that expression of those needs has become more vocal, more systematically set forth.

Previous to Dean William S. Gray's *Reading interests and habits of adults*, published in 1929, the principal studies on the subject of reading interests had been carried on by teachers investigating the reading habits of students in elementary and high schools. In Dean Gray's very full Bibliography on the subject he notes one study, *Reading tastes of high school pupils*, carried out in 1902. After 1920, various articles appeared in library journals and other periodicals on such subjects as "Changing fashions in dime novel substitutes," or "What do you read?" but by far the greatest research continued to be done in the field of student reading until the advent of E. L. Thorndike's book on *Adult learning* (1928), followed by Gray's study already mentioned. An article by Mrs. Helen T. Steinbarger on "Reading interest studies," appearing in the *Booklist* of the American Library Association for July, 1934, summarizes the work done since 1928.

The interest in readable books started in 1926 with the li-

brarians discussing the need for humanized literature (*Libraries and adult education*), possibly instigated by J. H. Robinson's *Humanizing of knowledge*, which was published in 1923. Miss Felsenthal's list of *Readable books in many subjects* was published in 1929. Since then Mr. Chancellor, Miss Tompkins, and Dr. Bryson have written various articles on the subject, and finally Dean Gray's book *What makes a book readable* (1935) reports the findings of his scientific study of objective methods of evaluating the readability of books.

Remember the sweep and scope of the "Reading with a purpose" series published by the American Library Association. Consider, too, the time and thought the school men have given to investigation of reading ability, to methods of improvement for children in school and for adults with school long behind them. Studies of reading ability have covered whole communities, special groups, and adult education classes. Half-a-dozen libraries in various parts of the country have by observation, by questionnaire, and by intensive study sought to learn why readers come to the library, for what purpose their reading was done, what success they had, what difficulties they encountered. There is no doubt that the reader is being observed and studied more carefully now than ever before.

For the librarian, too, the past generation has unquestionably seen a marked change in point of view. There is today an emphasis on the need of training that was felt by comparatively few forty years ago. The growth of library schools needs no comment. Here and there a prejudice against them still may linger, a glance askance still be their normal reception. But that will pass. We see today an increasing fear of intrusting the library field to untrained workers.

This changed point of view has unquestionably developed from the profession itself rather than from outside pressure. It is an appreciation of the opportunity, nay the necessity, felt by the people who do the work. There is no doubt as to its future.

What form it will take, however, offers another opportunity for thought and speculation. We all have seen the school men show how keenly they feel the necessity for lessening the atten-

tion to mere technique, the necessity for emphasizing the study of broader principles.

Specialization in training and in later work has made itself evident in our calling quite as much as in the fields of medicine, law, or engineering. The benefits have been equally great, and the dangers are equally threatening. One of the problems for the next generation of librarians and for those responsible for library schools will unquestionably be how to provide trained people capable of handling specific problems of library work and possessed at the same time of foundations wide enough and inspirations comprehensive enough to keep them from limiting their horizons to the particular tasks before them.

Faced with such a problem, the medical world developed the hospital intern. Some of us have come to feel that a similar system is called for in the library field, giving the man who has had his training in the schoolroom and in the laboratory some means of tasting, testing, trying various phases of library work before he finally settles down to cultivation of the particular field he finds most responsive to his particular capabilities.

The hand of the government or organized society has, within the memory of each of us, come to touch the librarian in a more intimate fashion than would have been dreamed of not so long ago. New York has joined Wisconsin and North Carolina and other states in requiring certification for librarians in posts paid from public funds. Massachusetts, I believe, has talked about this, though no decision has been reached. Emergency or work-relief projects recently have sent thousands of workers into library circles. The national association of librarians is going through the stress and strain of deciding whether it ought to stand by its resolution adopted a year or two ago recommending increased attention to library service by the federal government.

It makes little difference whether we approve of or deplore this tendency. Tomorrow will undoubtedly see more of it than did yesterday. Just how much more, and just what the effects are to be on the body politic and on the librarian, are questions that students of political science and government can answer

with more accuracy and finality than I. But of the fact there certainly can be no question.

LIBRARY EQUIPMENT

The tendency today in design of library buildings seems to indicate an increasing emphasis on the desirability of a central storage space with special reading-rooms and study-rooms arranged around it. In this, as in most other human affairs, the pendulum will probably swing to and fro, giving us a chance now and then to see library buildings favor the H form, shift to interior courts or a central stack core, or swing to something totally different. There is nothing ultimate, of course, in the precise form of the building. It must be adapted to the needs of the community it serves and the region that uses it.

There is no doubt, however, that all our future buildings will have a control of air and light far beyond our fondest dreams. Physical control of the air, to say nothing of sound, will certainly follow in the library as it develops in the commercial and industrial world. There will undoubtedly be more attention to the needs of the staff—more restrooms, recreation facilities, locker space, lunchrooms, etc.—all so obvious as to call for nothing more than mention. The library in larger centers must unquestionably face an increase in the mechanical handling of books and readers, regretfully leaving to the smaller institutions the personal contact the fortunate librarian in such a post is able to make between book and reader.

THE CONTROL OF BOOKS ON THE SHELVES

In the control of books on the shelves it is safe to say that the problems of classification will probably loom as less important in principle than they did a generation ago. Looking backward, we recall the missionary zeal—the crusading eloquence—with which the Dewey Decimal System, the Cutter Expansive Alphabetical System, the systems brought forward by Schwartz in New York and Perkins in San Francisco, all had their claims and advantages proclaimed on every occasion that offered.

As a practical matter the problems of classification as a sys-

tem have been simplified by the increasing use of the cards printed by the Library of Congress, all supplied with Library of Congress Classification and many with DC marks. The tendency with all of us probably will be to work toward broader groupings, more elastic divisions, more ready recognition that we are part of a rapidly changing world, more recognition that ultimate reliance must be made on the staff and the catalog.

And with mention of the catalog we have what is one of the most important problems facing the new generation, the younger people. Let us hope they will solve it in more satisfactory fashion than we have done. Just see where we are today. English, French, and German national libraries are all demonstrating their belief in the desirability, not to say finality, of the author record in form of the printed volume. The Vatican Library, to be sure, has given unqualified adherence to the card catalog as a satisfactory mechanism.

Here, in this country, the printed catalog in book form now is almost a museum specimen, and yet none of us can fail to pay tribute to the skill, the sympathy, the scholarship, the understanding displayed by such men as Charles Ammi Cutter in his Boston Athenaeum catalog, and by the compilers of the long series of catalogs issued by the Boston Public Library, the Peabody catalog in Baltimore, the Surgeon General's catalog from Washington, and the annotated catalog of the Carnegie Library of Pittsburgh. The past forty years, however, have seen us all swing unquestionably into the field of the card catalog. When we consider the millions of cards that are now stored away in Washington, we see the problem that has been created for the trained or the untrained reader who works with the catalog of a large collection trying to learn what the library has on such a subject as the World War, or aviation, or philosophy—anything you please.

The card catalog is admirable for keeping its information up to date in a form readily used if the reader has accurate knowledge of the precise title or the precise phase of the subject he is looking for. The latter side of the problem, however, is complicated by the fact that he must be sure his definition of his phase is the same as that of the maker of the catalog. The reader has the

difficulty of fingering large masses of cards. The librarian has the difficulty of either keeping these cards clean or reprinting them when worn and soiled. The card catalog is unquestionably elastic, flexible, a devourer of space and of time in consultation. It escapes the manufacturing costs of the printed catalog, but it is more expensive to administer.

Some of us have felt that, if large libraries retain the card catalog, they will sooner or later have to divide it into groups for the average or unsophisticated reader with simple demands, and separate groups for the man making a comprehensive survey of a whole category or faculty. (To a certain extent we do this now, of course: for example, when we arrange our subject cards by date of publication or date of composition, putting into a separate group all books before 1900 or 1920.) The reader with any experience in the use of a large card catalog today must frequently realize that he can get best results by referring first to printed catalogs, bibliographies, or some other similar forms of aid, and supplementing this preliminary delving by his fingering of the cards.

Perhaps we may be coming to a period when our large collections will be forced to adopt the printing of author catalogs, cumulated from time to time and supplemented by subject guides covering limited fields and limited periods of time. To a certain extent the Harvard and Boston Public Library bulletins of a generation ago offered an encouraging solution to this cataloging problem. Harvard has substituted the charming *Harvard Library notes* for the bulletin; and the Boston Public Library bulletin confines itself today to the listing of new books, with comments on and reviews of some of the more striking titles.

In connection with this cataloging problem, the growth of recognition of the necessity for increased indexing and abstracting of periodicals is noteworthy. In 1893 there were about twenty printed indexes of periodicals available in the whole field of Western scholarship. Today, forty years later, we have between two hundred and three hundred, of which we certainly can count from seventy-five to one hundred as of major importance.

To us it is instructive to see the recognition of the importance of this tool paid by American librarians and their early emergence in the field. *Fortschritte der Physik* began in 1845, the *Chemisches Centralblatt* in 1850, and the *Zoological record* in 1864. It was in 1853, however, that William Frederick Poole first introduced his *Index* to the public, and work on that had really begun four or five years earlier. It was in 1879 that Dr. John Shaw Billings began in Washington his *Index medicus*, bringing to fruition a task which he, like Poole, had begun several years earlier.

The comparatively recent growth of union lists of periodicals, government serials, and newspapers, and the continued efforts to increase co-operative cataloging, are worth remarking. Printed indexes to the contents of books and periodicals have grown so strikingly in the last generation or two that we are sure their multiplication and development will continue.

The question of research and the publication of its results is causing concern among producing investigators as well as among librarians. Sometimes it looks as though a monster machine had been roused or created, strong and powerful when properly controlled but with an inherent or implied threat if the grasp on the steering wheel or the pressure on the feed valve shows weakness or hesitation, like Goethe's *Zauberlehrling* when he forgot the word of control. It is certainly beyond the power of the average man today to give attention to the mass published in his own specialty, saying nothing about related and cognate but somewhat distant fields. Is he to throw his hands up in despair? Or is some new mechanism to be developed?

Many graduate students are delving deep; the stream of periodicals and journals and series and studies sweeps on with ever growing volume and force; the injunction is constantly "Produce," "Produce!" Industry rejoices in the research bureaus set up for many phases of scientific investigation, from electric communication and cellulose utilization to poultry oils and butter fats. Academic and industrial research is glimpsing how much duplication is evident—harmless, even useful, when followed primarily as gymnastic exercise; wasteful of time and

effort when two strive for the same results, each ignorant that the other is in the field.

Industry, to be sure, occasionally looks at all this research activity as a race, with a crown for the victor at the goal, warning the participant, however, to train in secret and say nothing until the patent shall be granted or the paper published. Perhaps the tendency today is toward more co-operation, more friendly rivalry, less stealthy cultivation of trade or professional secret attitude than was common a few years past.

Common sense tells us that sooner or later the necessity for a clearinghouse for information about these projects will be recognized. A projector may stake out a claim proof against the world if he files notice at some central point and shows evidence of reasonable activity in working that claim. It will fall back into the public domain after a certain period unless he demonstrates that he is actually trying to do something worth while.

So, too, it will become increasingly necessary that the results already attained in a given subject be set forth by a trained and competent surveyor or timber-cruiser before the investigator begins work in the field or laboratory. Similar surveys and evaluations must follow at convenient or helpful intervals.

This is being done in some libraries today by the library staff itself or by assistants trained in library methods and paid for by an outside agency. Tomorrow will undoubtedly see more of this kind of work than yesterday or today. There is no question on that point, except as to details. The end and the aim are as plain as a pikestaff, as certain as summer.

Another phase of the catalog problem is its cost. What does a library spend on its catalog records? A tenth, a quarter, a half of the salary allotment? What ought it to spend? Answers to the first questions are a simple matter of arithmetic. To settle the last one will call for more time and thought than have hitherto been given by any librarian I know. The question deserves more study and undoubtedly will receive it.

Another change in our point of view, as compared with that of the past generation, is the increased attention paid to the gathering and preserving of ephemeral material. Pamphlets

have always been with us, broadsides too; it is almost a certainty that the librarian of tomorrow in a research collection will be struggling with his pamphlets, his broadsides, his leaflets, to a degree his predecessors never approached.

TREATING THE INCREASING VOLUME OF PRINT

This all means undoubtedly that the book stock will normally continue to double every twenty years in the usual university or research library. For the circulation collection the problem is less acute, because of wear and tear. For the research collection there may perhaps be some—shall I say relief? or distress?—in the fact that much of the book stock since 1870 will disappear sooner or later because of the poor paper it was printed on. There is also the certainty that an increased use of books produced or reproduced on film will lessen the demands for storage space. But it surely means that, even if the storage space does not double every twenty years, there will be insistent demand for more storage facilities. The inevitable step is, of course, an increased mechanization of the storage and delivery of books. The next consequence is that there will be greater reliance on the catalog and on the printed indexes, decreased reliance on the classified groups put at the reader's command, and increased cost of operation.

Carry this doubling on every two decades for any length of time and we soon reach a realm of fantastic or astronomical magnitude. One element of relief will unquestionably come in the recognition of the necessity for greater selectivity, greater specialization in additions. The next generation will probably see fewer comprehensive collections of books and a greater number of small centers in fields of lesser circuit.

The problem of book storage and mechanical care of books offers an analogy to the problem of elevator transportation inside a modern office building. By increasing the number of elevators, the number of floors can be increased. If this is carried on indefinitely, however, the elevators have to carry so much dead weight in shape of equipment or have to use so much valuable floor space as to call a halt on their increase.

It was President Eliot of Harvard who called for a storage warehouse, for a separation between dead books and live books. His suggestion raised a storm of protest, everyone standing up to ask how he or anyone else could say that a given book was ever dead or might not probably be wanted some time or other. This protest was adequately voiced in the report of the committee of the Harvard faculty drawn up not so long after President Eliot made his suggestion at the Magnolia meeting of the American Library Association in 1902.

However, President Eliot in this as in other fields demonstrated his foresight and his intelligence. The time is not far distant when we shall perforce have to divide our books not so much into classes of live and dead ones as rather into classes of extensive immediate use and more limited and more distant use. Is it a wild dream to think that some day, perhaps, New England libraries will have a central storehouse, say in the Connecticut Valley, not so far from Springfield, not more than a day's march for most places, offering opportunity for speedy daily transference of books? Another place, perhaps halfway between New York and Philadelphia, for the libraries in that region? Other storage warehouses in other parts of the country?

There is, of course, the disadvantage of delay in access to specific titles, meaning a wait perhaps of twenty-four hours for a book, or a trip to the storehouse. There is always the increased wear and tear due to transportation. And perhaps even more important is the psychological effect on the reader's attitude toward the library and its service, for he will certainly oppose a change until he has become accustomed to it.

The advantages are equally obvious: (1) the increased speed and ease of access to the stock kept in the central building; (2) the lessened wear and tear due to less crowded shelves and less frequent shiftings; (3) the increased health—or decreased harm—for the books stored in places distant from the industrial pollution inevitable in our larger cities; (4) the advantages of pooled resources, if these reservoirs can care for the stock of a given region. Farther on we shall consider how increased facil-

ties of transportation, increased ease of telephone connection, and the possibilities in such things as television will unquestionably affect this problem of storage.

While we are dealing with things of such magnitude, let us compare the costs of library service today with those of the not-too-distant past and attempt to project these comparisons into the future. Taking, for instance, the New York Public Library not quite forty years ago (for the fiscal year of 1896/7—the first it is fair to compare with later years) we find it spent for books \$52,474.76, for salaries \$63,814.07, all other expenses adding to a total of \$143,236.79. For the calendar year 1935 it spent, in its reference department, for books and prints \$172,142.28, more than three times the 1896 record; for salaries \$1,159,688.42, about eighteen times as much as forty years ago—a total, with everything else added, of \$1,511,705.54, over ten times as much. The corresponding figures for Yale University Library run as follows: for books in 1896/7 it spent \$13,437.71, for salaries \$12,680.94, and with all other expenses a total of \$30,467.00. For 1934/5 the corresponding figures are \$85,436.97 for books, more than six times as much as in 1896; \$282,713.28 for salaries, a twenty-fold advance; for all expenses \$461,171.13, fifteen times as much.

Harvard in 1896 spent for books \$19,604, for salaries \$27,390, all other expenses \$8,698—a total of \$55,692. For 1935 it spent for books \$88,955, a four-and-a-half-fold advance; for salaries \$163,995, nearly six times as much; all other expenses \$99,119, more than ten times as much; total \$352,069, an almost seven-times advance. Is it fair to assume that forty years hence we shall have the same geometrical increase?

NEW INVENTIONS AND THE LIBRARY OF THE FUTURE

And that brings us to a consideration of the effect on the library of new developments in science and industry. Forty years ago our library records were either entirely manuscript or a combination of manuscript entries and printed forms. Our catalogs were mainly printed books or manuscript cards, though a

few did show cards reproduced by some of the gelatin processes. There were at least three sizes of cards in use, perhaps more.

Today we see manuscript records only where typing or printing is impossible, and those are rare cases. Our catalogs are primarily on cards, standardized as to size. Thanks to the vision of Dr. Putnam and the Library of Congress staff, these cards are printed today in such large numbers as to make it wasteful to use anything but Library of Congress cards when they are available. And when it is not feasible to print cards, we reproduce them by mimeograph, multigraph, photograph—manuscript entries being so few as to call for explanation or justification. And we are satisfied with these records!

Just think for a moment, however, of the way the combination of the mechanical punching of cards and the use of the electric current have revolutionized the making of records in the fields of statistics and industry. Why has the library world never applied these methods to its problems? How long do we have to wait before a reader is able in this way to identify the cards in the whole catalog which record the particular topic he is searching for? These developments are bound to come. Just when or how or where is something perhaps librarians can answer.

Though we librarians may not head the procession in this respect, we are not shamefully far in the rear as to telephone service, which is now taken for granted as part of the normal library equipment. The time is not long past, however, when it was necessary to put on one's hat and walk to the library to renew a book, to verify a quotation, to check on an author's birthday.

Recently the staff at our information desk at the New York Public Library was asked to record the questions the telephone shot at them for one typical, normal hour, as near the average as possible. Here are a few of the questions:

- Do you have Brassow on medals and orders?
- Have you a list of art schools in New York City?
- Which Turner wrote on *Electricity and heat*?
- What is the form of address for a monsignor?

What is the origin and meaning of "boondoggle"?

What information about individuals does the *City directory* give?

Where can I hire lantern slides on scientific subjects?

What does "droshky" mean?

What is the correct spelling of Irvin S. Cobb's first name?

How far back does your file of Jersey City directories go?

What is the meaning of "dermetics"?

Exact dates of death of Edward VII and Queen Victoria.

What have you on gambling games, particularly faro?

What does the quotation "Hinds of spring" [identified as "Hounds of spring"] refer to and come from?

What has the library about Dr. Janeway, a well-known physician of the early nineties?

In writing to an earl do I begin "Dear Earl"?

Where can I get complete information about the Society of Arts and Sciences?

Why is part of the Monroe Doctrine printed in italics in the textbook I'm using?

Who publishes *Scottish bankers magazine* and where?

Twenty in one hour, one every three minutes! If that number is multiplied by the thirteen hours the desk is manned each day, some idea is had of public service the past generation never dreamed of. Is there any reason to assume that the next generation is not to see equal, if not greater, development?

How soon are we to see television applied to long-distance reference work? A man today can sit at home and have the librarian tell him over the telephone what the *World almanac* records as the vote for representative in a given congressional district in 1880 and 1932. It certainly will not be long before some means will be developed by which the librarian will put a given book in some kind of a machine and permit a man sitting in home or office to refer to it, if not to read it at length.

The phonograph, the dictaphone, the slide rule are so common inside library walls as to call for scarcely passing comment. Some of us, I fancy, cannot recall when the photostat and other photographic equipment were not a normal part of library equipment. A few can go back to days when libraries had no such thing within their walls nor any dream that such things would ever face them. The importance, however, of the photo-

stat and other photographic means of reproduction in library work needs no comment here. It is interesting to note, however, that it was a Yankee from the Green Mountain State, Henry Stevens of Vermont, who nearly seventy years ago saw a vision and, after ten years of experimenting, printed at London in 1878 his *Photo-Bibliography; or, A word on printed card catalogues of old rare beautiful and costly books and how to make them on a cooperative system and Two words on the establishment of a central bibliographical bureau or clearing house for librarians*.

The significant development of the technique of the use of reduced film—16, 35, or 70 mm.—has aided research by providing an inexpensive and simple method of reproduction and distribution. It will certainly aid in easing the problem of storage. It is said that new developments in this field make it not fantastic to believe that soon we shall be able to reproduce a whole book of normal octavo size on a 3×5 card.

This reduced film will aid in the systematic development of a collection. Librarians everywhere have been systematically checking recognized bibliographies to locate copies of books not on their shelves. This, followed up by a moderate expenditure of money for photostat or photographic or film reproductions, leads to the realization that in certain groups librarians may look with equanimity on a request for presentation of a given text. If it cannot be given the reader in the original, it certainly can be handed him in some form of reproduction. This new technique will also aid in systematic reproduction of books printed since 1870, on paper too poor to last but with messages too important to lose permanently, though perhaps not of sufficient importance to justify commercial reprinting or reproduction.

It is amusing to look at the new problem these unusual techniques develop. We now frequently divide our staff administratively into those charged with the care of printed books, manuscripts, maps, prints, etc. Who, pray tell, is to care for a typewritten document? It is unquestionably manuscript; it is unquestionably printed. It cannot go to both departments. What effect are these new films to have on these divisions into

departments? Will the care of films be so special, call for such particular skill, as to urge the development of a department or division of films? Or will these records be stored in the standard bookstack? The makers of films tell us today that films must have satisfactory control of temperature and humidity if they are to have any hope of permanence. Does this mean speedy air conditioning for the whole bookstack? Or are the films to be kept in a separate storeroom?

Well, what is the answer? What does it all mean? "Ships are but boards," Shylock says, "and sailors men." It would be natural for the librarian to cap that line by adding that books are but paper sheets sprinkled with lampblack.

Absolutely true, but absolutely misleading. Back of the ship is the spirit of designer and commander. Back of the book is the spirit of the man with the message, the spirit of the reader hungry to see or hear it. That spirit has been with us long enough to make us sure that no matter whether we know what books will look like three hundred years from now, no matter whether we know how they will be shelved or read or used, we are sure that books in some form will play as important a part in the intellectual and cultural life of the community then as they do now, as they have done for the past three hundred years. And the librarian will play as important and as responsible a part in their interpretation as he has for the past three hundred years.

LIBRARIANS AS ENEMIES OF BOOKS

RANDOLPH G. ADAMS

IN A little classic on the subject, William Blades enumerated certain of the enemies of books.¹ Victor H. Paltsits, of the New York Public Library, has remarked that Blades omitted what should have been his first and most important chapter.

That first chapter should have been devoted to librarians who mutilate books with embossing stamps or rubber stamps, write upon and muss the title pages, cut open leaves with scarred and ragged edges, write class-marks with white ink on the backs of the bindings, and do with them as one librarian said, "We fix our books so they will not be of use to anyone else."

While it is true that Blades did not particularly consider librarians, he did include "collectors" as agents of biblioclasm. In the half-century since Blades wrote, both "librarian" and "collector" have come, in America at least, to have meanings totally different from the significance attached to those words in the 1880's. The librarian, we are told at each successive presidential address² given before the American Library Association or its ganglia, is no longer a curator of books—he is an administrative official and a promoter of adult education. The modern American book-collector, we venture to suggest, is no longer the miser who gloats in seclusion over volumes he does not read and will not permit anyone else to read.³ He is more likely to be a close student of bibliography, who does not hesitate to write

¹ W. Blades, *The enemies of books*, was first published in the *Printers' register* (London, 1879). It has been printed in separate form, London, 1880 (2 eds.); 1881; Paris, 1883; London, 1888; New York, 1888; London, 1896, 1902.

² E.g., L. R. Wilson, "Restudying the library chart," *Bulletin of the American Library Association*, XXX, 480.

³ The characters in Flaubert's *Bibliomanie* would never understand Sir William Osler's well-known dictum, "the true bibliophile has a keen pleasure in seeing an important document in its proper home." Flaubert's book may be read in Dr. Theodore W. Koch's translation, and Osler's point of view is set forth in the *Canadian Medical Association journal*, September, 1912, p. 834.

both popular and learned articles on the subject. It may even be said that the collector is picking up the mantle of scholarship dropped by the librarian as the latter ascends into the heaven of efficiency. This is entirely proper, as the book-collector is often a man of feeling and sentiment, characteristics which are in danger of being trained out of the modern librarian.

There is no need to view with alarm the evolution of the modern librarian. Bewailing his transformation would be quite useless. He has to think about enlarged organization, increased facilities for public service, and air-conditioning his stacks. Often he is driven by circumstances to regard books as replaceable commodities, which, if worn out in public service, have done their duty.

Many a book-collector or bibliographical expert would be a dreadful misfit if put in charge of a great public library. But who is going to think about those books which are irreplaceable? What is to be done about the rapid increase of libraries and collections in which public service is *not* the keynote of administration?

"SPECIAL COLLECTIONS"

In that standard reference book, the *American library directory*, one finds constant use of the term "special collection." Such an expression connotes the conception of a library as an aggregation of blocks of printed paper, which may contain practical information or mere literary expression. To call the Thomas Prince Library (now in the Public Library of the City of Boston) a "spec. Coll. Americana" is not likely to suggest that it contains two copies of the *Bay Psalm Book*. According to the *Directory*, there is in the city of Washington a certain "Folger Shakespeare Memorial," where there is a "special collection" on Shakespeare. For the sake of brevity, the *Directory* does not say "a man named Shakespeare," but it might just as well have done so. In the case of a library of rare books where a first edition of Champlain's *Voyages* is shelved next to a first edition of *Tom Sawyer* (*Ch* before *Cl*, of course), the system of the *American library directory* breaks down completely, and, in conse-

quence, the 1935 edition simply omits all mention of the Chapin Collection at Williams College.

The editor of the *Directory* freely admits that there has not yet been formulated a term to designate rare-book libraries, and permits us herewith to broadcast the plea that someone find the word before the next edition of the book. One thing is sure: it isn't "special collection."

What term, then, can we use to indicate that we are referring to the library wherein the technique of administration must be almost diametrically opposed to that which must prevail in the library which is trying to serve the *demos*, the library where the emphasis is placed not upon *use* but upon *conservation*? There can be hardly a doubt that such libraries exist and are coming to exist in greater numbers, either as separate entities or as the *sancta sanctorum* of public libraries. For example, Henry E. Huntington and Henry C. Folger erected separate library buildings, practically unconnected with any existing institution. Then again, the Browns of Providence and William L. Clements of Bay City erected separate buildings and gave to educational institutions already existing (Brown University and the University of Michigan) collections to be administered as separate divisions of those institutions. There is yet another example, where the library is given to be separately maintained inside an already existing library, such as the Harry Elkins Widener Collection at Harvard, or the Hampton L. Carson Collection at the Philadelphia Free Library.

Finally, there is the case of the collector in, let us say, Winesburg or Gopher Prairie, whose painstaking life-work in collecting rare books is handed over to the local librarian, and a first edition of Hawthorne's *Scarlet letter* is intrusted to a part-time page boy, who tosses it on a shelf alongside the "Everyman" or "Modern Library" edition of the same book. It is not improper to remark that, though the librarian of the Huntington Library is certainly not an enemy of books, it is hardly the fault of the librarian at the Gopher Prairie Public Library if he does not speedily become one.

It is possible that a real danger lies in the fact that not all

librarians detect the wistful desire of the collector, great or small, to want his collecting work preserved. It is equally possible that many librarians fail to observe that book-collecting comes before librarianship, that until books are collected they cannot be used in libraries, and that the specialist, whether he be a Folger or a collector of local Winesburg imprints, is performing that fundamental function and should be encouraged even to the point of coddling.

THE BOOK-COLLECTOR AS A PROSPECTIVE BENEFACTOR⁴

Let us consider those factors in modern life which, when recognized by the librarian, are even more important to him than increases in his book budget. If today a man makes a collection, what is he going to do with it? The epoch of the great family library is over. Apartment-house life, the migration of the children, all the disruptive tendencies of present-day life militate against the future building up of great libraries such as those of the dukes of Bridgewater, the dukes of Devonshire, and the like. A man cannot take his books with him when he passes on to the better world. Children do not always inherit their parent's tastes, and yet they are likely to have a very real interest in the money investment represented in the life-work of a collector. A new factor accentuates the foregoing—the inheritance-tax gentleman from Washington will want from a quarter to a half of the value of a great library.

When George Brinley's library⁵ was sold, there was a field-

⁴ There is a considerable literature on this subject. G. W. Cole, "Book-collectors as benefactors of public libraries," *Bibliographical Society of America, Papers*, IX, 47-110, is a good survey for Americans. Of the many particular studies, the following are worthy of note: L. L. Mackall, "Sir Wm. Osler, as a bibliophile," *Bulletin of the International Medical Museums*, No. 9 (1927); J. Christian Bay, "Edward Everett Ayer," *American collector*, IV (1927) 130; R. O. Schad, "Henry Edwards Huntington," *Huntington Library bulletin*, No. 1 (1931), pp. 3-33; and that most readable of all little books on the subject, Henry Stevens, *Recollections of Mr. James Lenox* (London, 1886). The last named has been somewhat facetiously called "Recollections of Henry Stevens by Henry Stevens with a few remarks on James Lenox," and it does contain a few extravagances. But it remains a book which should be regarded as the *sine qua non* in the education of a librarian. The foregoing titles are the merest suggestion of what has been written about individual collectors.

⁵ "Greatest Americana sale ever held," R. W. G. Vail, *The literature of book collecting* (New York, 1936), p. 32.

day for collectors, but something great was lost—the work of the collector. In so far as the Brinley books have come to rest in permanent repositories, Mr. Brinley's work has been partially salvaged. But, if a collector wants his scholarly work of collecting, as well as his books, conserved, he must look around and find, or erect, an institution in which that can be done. But *is* the institution of his choice (usually and quite properly selected locally, or for some purely sentimental reason) a fit trustee of his treasures?

The benefactor can get some idea of its fitness by asking what the institution of his choice is doing about its own *rariora*; for another impetus to the accumulation of rare books in libraries comes from the fact that America is growing up. Even trans-Appalachian institutions are celebrating centennials by the score. Any library that has reached its century mark is likely to have, merely by virtue of the passage of time, rare books upon its shelves, which should be removed from circulation and locked up.

Over a hundred years ago the great Isaiah Thomas, printer, publisher, and book-collector, gave to his friend, Timothy Alden, several hundred products of the Thomas press at Worcester. They were donated for the purpose of founding a new library in the wilderness of western Pennsylvania. Today Allegheny College has those books in excellent condition. How many century-old American libraries can show the books of the founder in mint condition? If they cannot, perhaps there have been some enemies of books occupying the librarian's office.

Whether the prospective benefactor be a collector of early printing in Gopher Prairie or whether he has riotously expended his substance on Grolier bindings, he will look rather closely at a librarian before he intrusts the results of his years of thoughtful work and painstaking care to an official who is interested primarily in adult education or statistical studies in the reading habits of the public. The man from Winesburg may have just as much fun collecting local imprints as Earl Spencer ever had in collecting Caxtons—and his work may be comparatively as

important. For there are today early Ohio and Minnesota imprints that are unique, though these states are not old in point of years. The librarian who fails to take care of the Winesburger as carefully as the John Rylands Library has taken care of Earl Spencer is not really friendly to books.

An equally important contributing factor in the building up of personal collections in this country is the increasing interest of Americans in preserving the evidences of their own local cultural history. If the immense new addition now being built back of the Library of Congress were doubled in size, it would probably be insufficient to hold the printed and documentary material necessary for a thorough investigation of the manifold phases of American cultural development. We have no right to expect the Library of Congress to do everything for us. It has given us a priceless advantage in providing Library of Congress cards; it is preparing an equally important work in the organization of its Union Catalog; it provides the only repository of copyright books (England has several to our one). But we have no right to expect the Library of Congress to provide a complete file of the early newspapers of Little Rock, Arkansas, or of the non-copyright publications of a private press in Phoenix, Arizona.⁶

No, in America this work must be taken over by local enthusiasts. The establishment of a federal library agency may help bring more readers to libraries, but it can hardly be expected to provide books of the type most worth preserving. Even if it is easy to look to the federal government to do all our work, in collecting at least, this will not help. Moreover, the Library of Congress itself, as Dr. Rosenbach has pointed out, has some serious lacunae, for it has no *Columbus Letter* of 1493, no Hariot's *Virginia* of 1588, and no *Bay Psalm Book* of 1640.

We must have more and more local repositories, more provincial centers of culture. If the material already exists, or has existed in the locality, it may well be the function of the local librarian to preserve that heritage. But, for reasons already sufficiently stressed, he cannot, for he has neither the time, the

⁶ See J. T. Winterich, in the *Publisher's weekly*, October 26, 1935, pp. 1537-40.

energy, nor the funds. Then the least he can do is to cultivate, foster, and even pamper the local zealot who is doing that job. The greatest encouragement he can give that local collector is to take care of the material already in the local library and to offer to safeguard what may be given to him. A librarian who cannot, or will not, do this, can hardly complain if he is classed as an enemy of books.

"THE GOOD, PRACTICAL LIBRARIAN"

At a meeting of eastern college librarians, held at Columbia University in November, 1935, one librarian lamented the necessity for "promotional activities" in his library in the following words:

If he is not already one, he [the librarian] will be forced to become a professional book-lover. Book-loving is no doubt a noble passion, praiseworthy in business men and other amateurs, but out of place in the temperament of the librarian.⁷

The selection of the words above suggests that this librarian places the book-lover in a class with the professional gambler—a person living in sin of some sort. The juxtaposition of the terms "business men" and "amateurs" conveys certain scorn as to the possible scholarly attainment of the business-man bibliophile.⁸ Moreover, this librarian says so clearly that book-loving is out of place in the "temperament of the librarian" that no one can possibly mistake his meaning. Aside from the fact that some minor Pierpont Morgan who planned to give his books to a library might be taken aback by this pronunciamento, one wonders what will happen to the books already confided to the tender mercies of librarians who share this view. If a librarian really wants to build up his institution, and if his temperament and training do not qualify him as a book-collector (as all too frequently they do not), is he the friend or the enemy of books?

⁷ T. E. Norton, "The college library and college teaching," *School and society*, XLIII, 241.

⁸ An examination of James Lenox' annotated copies of the Ternaux-Compans catalogs suggests that some business men are more scholarly than some librarians.

There is ever greater insistence today upon the business of "training for librarianship." That means the librarian must go to a school of library science, which is likely to be attached to a university. Here he meets a great many scholars and is influenced by their point of view. But, for every scholar with whom he comes into contact, he meets a dozen whom we properly term "mere scholars"—people who view books simply as a mass of print from which information is to be extracted. He hears the mere scholar assert that he wants *only the text* and that he would as soon use a facsimile, or reprint, as use the original. It is said that, upon one occasion, an academic person met Mr. A. Edward Newton. Newton has written extensively on the subject of book-collecting, and, as any dealer will attest, has probably done more to increase the appreciation and the reading of English literature than many a professor or librarian. To Newton the academic announced, "I am a scholar; to me a photostat is as good as the original." Newton swiftly countered, "Any man who would make a remark like that, would probably just as soon kiss a pretty girl through a piece of plate glass." The librarian should be careful how he makes light of the collector's enthusiasm lest he reveal his own shortcomings.

THE PRINCIPLES OF THE ADMINISTRATION OF RARE BOOKS

When a book comes to a library, the first question to be asked is this: "Is the book rare, or even potentially rare?" The correctness with which the question is answered is a fairly accurate measure of the taste, discrimination, and scholarship of the official who decides. Good taste and discrimination cannot be taught in schools of library science, and university degrees do not necessarily imply attainment in scholarship.

If it is decided that the book is rare, then the order department must see that no accession mark defaces it; the head classifier must be sure that the book is headed for that section of the library which is locked beyond the reach of the ordinary reader; the cataloger must take care that it is not mutilated by an embossing or perforating stamp, nor by a blotch of indelible ink, and that the binding is not defaced by a paper label or by white

ink on the spine. Then the curator of rare books must see that the book is placed upon the shelves of the treasure room in accordance with some system which may not be the Dewey or the Library of Congress. It is possible that no standardized system of classification of rare books will ever be accepted; the rules must be elastic and adjustable to the eccentricities of a particular collection. When asked the first principle of librarianship, the late Archibald C. Coolidge, director of the Harvard Libraries, replied: "Have very few rules and break them all." The manner in which a librarian can break his own rules is a criterion of sorts.*

But when the book has reached the treasure room, its dangerous career has only just begun. The treasure room need only be a locked case in the librarian's office. Louis XVI gave Benjamin Franklin some books for the newly founded University of Pennsylvania Library. As recently as our own college days, Morris Jastrow kept those books in his private office.

The rare book must now be kept away from all unfit persons. At this point many librarians throw up their hands and cry aloud, "But I cannot do these things; I am supported by the taxpayers, and the taxpayers demand service." The reply is exceedingly simple. "Dear librarian, you are also paid by the taxpayers to protect public property." More and more rare books are annually becoming public property. The ordinance officer who distributes army property without proper formality is court-martialed and sent to the Atlanta penitentiary. The librarian who allows rare books to be used without proper restrictions is an enemy of books. There are cases on record where trustees have discharged a librarian for inattention to the care of public property in the form of rare books—where the trustees actually had a greater appreciation of books than the librarian. Abuse and misuse of public property is a serious offense, as in America we are only just beginning to learn.

* Dr. Wilberforce Eames once stood in a treasure room and inquired of the curator, "By what system do you arrange the books?" The curator timidly replied, "We use the chronological system, except when we don't want to." Dr. Eames replied, "It is a very good system. It is the one Mr. Lenox and I always used." A Scot, David Murray, put it thus: "The flowing tide of knowledge is apt to put the best devised schemes out of order . . ." (*Bibliography, its scope and method* [Glasgow, 1917], p. 43).

Quite recently we witnessed the havoc being wrought in the unique, earliest file of a certain newspaper in one of the largest American city libraries; there students from the local city college were observed pawing over the ancient and fragile papers in the preparation of "term papers" or "pre-seminar reports."¹⁰ When destroyed, as it is being destroyed by its improper use by unqualified persons, this file can never be replaced. If one could persuade Mr. Alexander J. Wall, librarian of the New York Historical Society, to tell his story, he would give some very explicit reasons why he now requires every student from a New York college or university who wants to use the file of John Peter Zenger's *New York Journal* to bring a letter in which that student's professor consents to be financially responsible for any damage caused by the student. A teacher who finds it necessary to replace a single copy of a New York newspaper for 1738 may discover that it costs him more than a month's salary. We all know of cases where the teacher thinks nothing of turning fifty pairs of grimy hands loose on the library's only copy of a fine book. We all know of cases where the professor gets exasperated and complains, "What are the books put here for but to be read?" The librarian can be ready with his answer: "The books are here for the use of fit and qualified persons. You are entitled to have your sophomores use to the point of destruction our set of the reprint of Henry Adams' *History of the United States*; but you are certainly not entitled to refer even a senior to our first edition presentation copy of Henry Adams' *Mont St. Michel and Chartres*, unless he is to read it under rigid supervision." The librarian who does not have the courage to face his readers in this fashion is certainly an enemy of books.

THE DISPOSAL OF USELESS OR OBSOLETE BOOKS

But readers are not the only danger which besets the career of the book. The amount of material which is piling up in libraries sometimes appals the poor librarian. He wants to get rid of

¹⁰ The librarian must distinguish carefully between the reader who is adding to human knowledge and the reader who is merely training himself so that later on he may add to human knowledge.

duplicates; he wants to dispose of "useless" books. Unfortunately and necessarily, this work in the greatest libraries must often be turned over to subordinates; and the librarian is even more appalled when he discovers that an assistant has been discarding as duplicates the copies from the private collection of the founder of the library—irreplaceable books.¹¹ Moreover, it takes an expert to determine which books are duplicates. There is the story of how the Library of Congress, many years ago, let go, as a duplicate, a book whose imprint proclaimed it to have been sold by Benjamin Franklin's firm. The Library had another copy of the book, with another and unimportant dealer's name in the imprint—so the Franklin item was let go as a duplicate. This stray was spotted by someone in the New York Public Library, where it was given a home. After the error was discovered, the curator of rare books at the Library of Congress waited five years for his opportunity to recover possession of the book. His patience was rewarded: but beneficiaries of such errors do not have to be as courteous as the director of the New York Public Library.¹²

The problem of the disposal of duplicates is fraught with danger. In 1623 the Stationers' Company, according to agreement, sent to the Bodleian Library at Oxford a certain book entitled *Mr. William Shakespeare's histories, tragedies and comedies*. This was probably among the finest copies of the renowned First Folio, as it was the only one intended for public deposit. By 1664 other editions had appeared. The "curators" at the Bodleian decided to sell "superfluous library books," and,

¹¹ Dartmouth and Yale have admirably protected themselves against this. The quaint old room in which the institution's "first library" was kept, has been carefully reproduced and reconstructed within the modern library. In it the "original library" has been reassembled as far as possible. The room is locked, and the books may be examined only by permission of the librarian. Disastrous fires at Charlottesville and Cambridge have left but a fraction of Thomas Jefferson's books for the University of Virginia, and but a fragment of John Harvard's library at his university. Probably no librarian at Williamsburg could have protected the books of William and Mary College against the soldiery of Lord Cornwallis and General McClellan. But if a Harvard librarian had sold as duplicate a book from the library of John Harvard, that could hardly be called an "act of God." For obvious reasons, we will refrain from naming the institutions where this has actually taken place.

¹² R. G. Adams, ". . . and sold by Messrs. Franklin & Hall," *Pennsylvania magazine of history and biography*, LV (1931), 24.

among them, sold their 1623 Folio. Two hundred and forty-two years later, when the book was found, it cost the Bodleian \$15,000 to recover its own copy of the First Folio.¹³ As the sale of the book by the Bodleian was done "by order of the curators," it can be seen that this business of a librarian's taking it upon himself to decide for all time and eternity what is important and what is unimportant may properly class certain librarians as enemies of books.

There is a difference, of course, between disposing of duplicates and disposing of books which the librarian thinks he is qualified to pronounce useless. If a library has two identical copies of a rare book, it may sometimes be justified in disposing of one copy—provided the other is locked up. But the problem of determining what books are duplicates is not one to be left to subordinates, and not one upon which a librarian is entitled to trust his own judgment unless he is also an expert bibliographer, which many librarians are not.¹⁴ The librarian who is also a thorough bibliographer is, according to many addresses given before the American Library Association, passing off the scene and being supplanted by the librarian who contends that he must be an administrator.

As to "useless books," or "junk," as the harassed librarian sometimes calls them, a fine case history has come to our attention. A certain librarian took over a new job. He considered the mass of books. He took the *United States catalogue*, and, by its aid, he divided all the books into two classes: first, those which were in print; and second, those which were not. He disposed of the whole of the second class as "useless" and "obsolete." Now the story sounds fantastic, but unfortunately it is true. In principle it differs not a whit from the conduct of a trained librarian who arrogates to himself the decision of what books are useful and what are not. The capacity for correct classification probably is, as Aristotle is said to have remarked, the essence of human wisdom. Today, by force of circumstances, the librarian has become the chief classifier of all human knowl-

¹³ F. Madan, *The original Bodleian First Folio of Shakespeare* (Oxford, 1905).

¹⁴ F. Madan, "The duplicity of duplicates," *Transactions of the Bibliographical Society* XII (1911-13), 15.

edge. What the philosopher has given up, the librarian has been forced to take over. But it is a function to be exercised with humility. Even the greatest of librarians must feel some misgivings about assuming that he is an Aristotle.¹⁵ It is an open question as to whether any librarian should ever dispose of any book of which he has no other copy. Certainly if the head of a library of deposit and reference arrogates to himself the right to make decisions about books which are seldom, or never, used during his own brief life span, he cannot complain if he is classed as an enemy of books.

GIFTS WITH STRINGS

There are librarians who have a horror of gifts "with strings tied to them," that is, gifts upon which the donor imposes conditions. It is said there exists a library which received a gift stipulating that flowers be kept always in front of the donor's portrait. It is conceivable that a collection could be worth it; and unless we were misinformed as to the identity of the library which had that "string" attached, this gift *was* worth it. The dukes of Marlborough and of Wellington, even today, make annual pilgrimages to Windsor Castle, there to deposit with His Majesty one small French flag, in token of their obligation for the lands granted their ancestors after Blenheim and Waterloo.

If one will examine the deeds of gift, contracts, and other legal instruments whereby great collections are placed in institutions, one will be interested to observe that the collector does, all too often, regard the librarian as an enemy of books, from whom the treasures must be guarded. One would not impose the condition that "the books shall not be permitted to leave the building" were it not for the fact that in the offing is the public-service expert and his unholy passion for "interlibrary loans" of any kind of material.¹⁶

¹⁵ It is probably not true that a recent graduate of a school of library science classified the first edition of Thornton Wilder's *Bridge of San Luis Rey* under "Civil engineering."

¹⁶ The gift-agreements of great libraries are worth study. Just as the study of early laws is all important to the social historian, because it tells, by prohibitions, what curious crimes the people were committing, so these legal contracts show what librarians are likely to do and what they must be restrained from doing.

We have all laughed at Mr. Edmund Lester Pearson's story of his intention to leave his books to a public library, *without any strings attached*. Of course, Mr. Pearson hastened to add, he would require the books to be kept in a separate room which was to be equipped with pink silk-damask chairs, silver lamps, and a curator who at all times wore a cutaway coat. Moreover, the catalog cards were to have gilt edges, and each book was to be forever sealed in a cellophane wrapper. But it is not conditions which go to these lengths of which we speak. It is rather the continued ordinary and decent care of his rare books which concerns the collector—the kind of care he gave them. The librarian who hesitates to accept gifts with such strings attached may be doing so because he is afraid of exposing his own shortcomings and of laying himself open to the charge of being an enemy of books.

If "strings" are attached, they may merely be the unreasonable whim of a prejudiced donor. But experience teaches us that they are much more likely to be accounted for by the fact that the donor is a better bookman than the librarian. This can easily be tested. Go to the private library of any well-known collector. In the first place, you are likely to find that a steel and concrete vault adjoins his library. You will find that, whenever he can, he has his books in their original bindings. If the original bindings are frail, or if the books are rebound by some noted artist, his treasures stand in well-made slipcases or solander cases. If he has old leather bindings (sheep or calf or the like), you will observe near by a bottle of one of those leather preparations recommended by Messrs. Lydenberg and Archer.¹⁷ You will discover that the vault is air-conditioned. Now seek the treasure room of any one of a hundred public libraries. You will find bindings broken and poor cripples tied up with pink tape; you will find books cracking at the joints; you will find rare pamphlets in scuffed and dirty paper envelopes instead of slipcases; you will find books on the floor, where the janitor is sure to wet them with his dirty mop; and of course you will

¹⁷ *The care and repair of books* (New York, 1931).

find books worn out by constant use at the hands of improper persons. Perhaps this is why strings are attached to gifts.

Librarians have a horror (and justly so) of the prospective donor who has a mass of late reprints of common classics and wants them housed as treasures. But the careful librarian does not assume that a nineteenth-century reprint of an eighteenth-century book is, *ipso facto*, common. There are cases where the nineteenth-century reprints are scarcer than the original editions.¹⁸ The careful librarian does not even reject the copy of the infamous *Ulster County Gazette*, which a dear old lady is quite sure Grandpa received at the hands of Martha Washington herself. By taking any and all *Ulster County Gazettes*, Mr. Vail has been able to give us the only authoritative study on how to know that forgery.¹⁹ Of course, the clergyman's widow who wants the librarian to take her dear departed husband's hundreds of dull theological works does present a problem. But she has to be handled lest she tell the Accounting Warden that the librarian is an ignorant person—particularly if that important parishioner has a fine collection of Keats he is going to give away. The librarian who belittles a collection of unimportant books in the presence of the owner divulges the fact that he lacks those human and sentimental qualities which are characteristic of the great collector.

We hope Mr. Blades was right in omitting librarians from his list of enemies of books. But it must be clear that the librarian who has become an impersonal administrator has disqualified himself for exercising some of the most important functions of his job. Someone else will have to take on these functions, and it ought to be part of the training of every librarian to see that someone else is equipped to do this work. Book collecting and the building-up of great libraries is as much a matter of the heart as a matter of the head. The man who is all heart and no head would be a very bad librarian. But the man who is all head and no heart is a very dangerous librarian.

¹⁸ E.g., William Hubbard, *Narrative of the troubles with the Indians in New England* (Boston, 1677).

¹⁹ R. W. G. Vail, *The Ulster County Gazette and its illegitimate offspring* (New York, 1930).

SOCIOLOGICAL FACTORS IN THE LEISURE-TIME READING OF HIGH-SCHOOL STUDENTS¹

HAROLD H. PUNKE

THIS article presents a comparative study of leisure-time reading done by students in twenty-two high schools—eleven located in Georgia (schools admitting white children only) and eleven in Illinois. Varying in size from 90 to 650 students, the schools in each case are distributed over a fairly large section of the state. The study is part of a more extensive investigation of the social background of students in the schools indicated, in which 3,467 Georgia and 3,369 Illinois students participated. The data were secured through questionnaires filled out during a class period set aside for the purpose. Not all students furnished data on every item.

Time and place of leisure-time reading.—Table 1 presents data regarding the time and place preferred by students for their leisure-time reading.² For students of both sexes in both states the home is the preferred place and the evening is the preferred time, although this latter preference is less apparent among students in Georgia than among those in Illinois. There is a preference for the school library over the public library as a place for reading, particularly in Georgia. This suggests a difference in the accessibility and perhaps a difference in the character of the material available at the two places. Girls show greater preference than boys for week-end reading, and boys for the free hours at school. The fact that boys more frequently than girls engage in gainful employment, their greater interest in

¹ The author wishes to acknowledge the assistance of Miss Wynelle Spell in making the tabulations and calculations which appear in the article.

² The data of Tables 1-4 were first tabulated by school grades. Where no significant differences between grades, or implications among grades, appear, only condensed tabulations are used.

athletics, and the greater freedom often accorded them to go out alone in the evening are no doubt important in time preferences for reading. A more detailed tabulation than that presented in the table revealed no grade differences regarding either time or place preference.

The fact that high-school students prefer to do their leisure-time reading at home and in the evenings suggests that a leisure-time activity is being developed which can carry over into after-school life—a carry-over which would be less likely if students looked upon the rather artificial setting of school or

TABLE 1
PREFERENCE AS TO PLACE AND TIME FOR LEISURE-TIME READING*

SEX OF STUDENT BY STATE	PREFERENCE AS TO PLACE				PREFERENCE AS TO TIME				
	No. of Students Re- porting	At Home	Public Library	School Library	No. of Students Re- porting	Vacant Hours at School	After School	Eve- nings	Week Ends
Georgia boys.....	331	1.11	2.68	2.21	334	2.49	2.84	2.06	2.61
Georgia girls.....	441	1.11	2.68	2.21	495	2.76	2.65	2.19	2.40
Illinois boys.....	713	1.11	2.49	2.40	705	2.75	2.91	1.74	2.60
Illinois girls.....	717	1.05	2.57	2.38	822	3.26	2.72	1.81	2.21

* The figures for place preference were secured as follows: There were three possibilities in place preference (home, public library, school library), and only cases could be used which rated as 1, 2, or 3 each possibility. All placements made were then added, and the sum divided by the number of students who made placements. Accordingly, the average placement nearest 1 indicates first preference. The figures for time preference were secured correspondingly.

public library as the place for such reading. Moreover, if leisure-time reading is done mainly at home, home influences are particularly important in the amount of reading done. The kind of lighting afforded in the home, especially the rural home, family disturbances, and other aspects of physical setting become important, as well as the supply of reading material. Here a closer contact of school and home, through parent-teacher associations and related aspects of parent and adult education, may be important in developing tolerance and co-operation on the part of parents regarding reading interests and needs of youth.

Furthermore, if students prefer to do their leisure-time reading at home, it might seem that provision of space in school or

public libraries for such reading is less important than providing a liberal amount of well-chosen reading material and a flexible loan system whereby high-school youths may readily secure material for home reading. It might, of course, be urged that if school or public libraries offered better reading facilities, students might do more of their leisure-time reading there, under supervision, and less of it at home. While this is perhaps true, it leaves out of account the significance of the family as a social unit—a unity fostered somewhat perhaps by home reading; overlooks the possibility of supervision through the selection of materials made available by the library; and neglects the importance of a carry-over reading habit for after-school life.

Time of reading in relation to amount read.—Data on time of reading in relation to the amount read appear in Table 2. This table relates only to "first preferences" indicated for the time categories of Table 1. Thus, only such cases are included in Table 2 relative to reading "During vacant hours at school" as indicated first preference for this time (over the other three possibilities) in the tabulations for Table 1. The same fact applies to the other aspects of Table 2.

Although the Georgia data are meager, the table makes useful comparisons possible. Thus a larger percentage of Georgia students, of either sex, report relatively small amounts of book reading—six hundred pages or less—than do Illinois students. This may reflect differences in availability of facilities and materials. It may also reflect differences in climatic conditions which make outdoor recreations more attractive in Georgia, during large parts of the year, than in Illinois. Social attitudes regarding what constitute desirable ways of using leisure time, resulting from the foregoing and other factors, are also important.

On the whole, students who prefer to do their leisure-time reading during vacant hours at school do less book reading than students who report other time preferences. An exception may be Illinois girls. The data for Illinois students, both seniors and all grades, show, for each time category, a larger percentage of

TABLE 2

RELATION BETWEEN TIME AT WHICH STUDENTS DO THEIR LEISURE-TIME READING AND THE AMOUNT OF BOOK READING DONE*

TIME OF READING	AMOUNT OF BOOK READING DONE (Pages)	GEORGIA						ILLINOIS					
		First Grade		Fourth Grade		All Grades		First Grade		Fourth Grade		All Grades	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
During vacant hours at school.....	(600 or less	81.8	85.0	69.281.8	68.268.2	66.548.8	25.8	31.8	31.3	14.2	38.0	29.2	
	601-1,200	18.2	5.0	30.8	18.222.7	15.7	32.6	35.5	53.1	42.9	44.8	39.3	
	(Over 1,200	10.0	.....	9.1	17.8	18.6	38.7	15.6	42.9	17.2	31.5	.....
Total num- ber re- porting.....		22	20	13	11	66	73	43	31	32	21	134	89
After school....	(600 or less	80.0	55.6	75.0	46.4	75.0	13.6	15.4	31.6	29.4	29.8	21.4	
	601-1,200	50.0	20.0	22.0	22.5	28.6	20.0	68.2	53.8	47.3	41.2	48.5	50.0
	(Over 1,200	50.0	.....	22.2	.....	25.0	5.0	18.2	30.8	21.1	29.4	21.7	28.6
Total num- ber re- porting.....		2	10	9	8	28	40	22	13	19	17	97	56
Evenings....	(600 or less	50.0	60.0	66.7	50.0	60.0	76.7	9.27	3.33	4.37	1.20	0.31	2.25
	601-1,200	50.0	30.0	22.2	22.5	28.6	13.2	24.8	54.5	44.2	9.45	0.45	6.48
	(Over 1,200	10.0	11.1	25.0	10.7	18.9	24.2	21.2	30.0	35.0	23.2	27.0	.....
Total num- ber re- porting.....		4	10	9	8	28	53	33	33	35	20	125	100
Week ends....	(600 or less	46.2	56.0	57.9	68.0	58.6	65.4	39.2	34.9	41.3	40.0	337.7	40.7
	601-1,200	23.0	32.0	26.3	8.0	32.4	21.5	52.1	43.4	39.7	40.3	345.1	40.3
	(Over 1,200	30.8	12.0	15.8	24.0	19.0	13.1	8.7	21.7	19.0	19.4	17.2	19.0
Total num- ber re- porting.....		13	25	19	25	58	107	69	106	63	72	244	385
Grand to- tal re- porting.....		41	65	50	52	180	273	167	183	149	150	600	630

* The data of the table, except the totals, are in percentages of the totals. The apparent discrepancies between the data of this table and the data of Table 1 on number reporting are due to the fact that not all students reporting time and place preference (Table 1) also reported the amount of book reading done.

girls reporting over twelve hundred pages of reading. The Georgia data, however, show no consistent differences between the sexes in this respect. Reasons for the foregoing observations seem, in the main, sufficiently apparent without further comment.

In neither state is there a consistent difference between the amount of leisure-time book reading done by freshmen and by seniors. If one assumes that seniors have as much leisure as freshmen, and that during their high-school careers they have developed the capacity to read more rapidly than freshmen, then the data suggest either that seniors do more leisure-time reading of periodicals than freshmen, or that their school careers have fostered other leisure-time interests which leave reading in about the same status at the end as at the beginning of the high-school period.

One should note the large number of students reporting week-end book reading, especially in Illinois, as compared with those reporting the other time preferences. This suggests that high-school students who read books during their leisure time do much of their reading on week ends.

Nonschool work and leisure-time reading.—The extent to which high-school students engage in nonschool work, at home or elsewhere, might be thought to influence their leisure-time reading. Table 3 presents data on this point. In Georgia 118 boys and 116 girls report twelve hours of work a week or less, while 93 boys and 51 girls report over twelve hours of work. In Illinois, however, the proportions are greater—207 boys and 149 girls report twelve hours or less, while 284 boys and 163 girls report over twelve hours. This suggests that Georgia students, as a whole, come somewhat more largely than do Illinois students from families in which youths are not expected to make an economic contribution to the home.³ The data may also reflect a difference in opportunity of employment in the two states, with a greater abundance of cheap labor available in Georgia than in Illinois for the kinds of work that high-school youths

³ For a further discussion on this point see Harold H. Punke, "Home and family background of high-school pupils," *School review*, XLIV (October, 1936), 597-607.

might be equipped to do, or a greater social taboo regarding the acceptance of certain kinds of jobs.

There is little or no evidence in Table 3 that the amount of time spent in nonschool work affects the amount of leisure-time

TABLE 3

RELATION BETWEEN NONSCHOOL WORK DONE OUTSIDE OF SCHOOL HOURS
AND AMOUNT OF BOOK READING DONE*

HOURS WORK PER WEEK	PAGES OF BOOK READING	GEORGIA		ILLINOIS	
		Boys	Girls	Boys	Girls
6 hours or less.....	600 or less	74.5	61.6	40.6	25.0
	601-1,200	15.7	23.1	44.6	46.2
	Over 1,200	9.8	15.3	14.8	28.8
Number of cases.....		51	65	74	52
7-12 hours.....	600 or less	55.2	58.8	46.6	40.2
	601-1,200	25.4	25.5	36.1	38.1
	Over 1,200	19.4	15.7	17.3	21.7
Number of cases.....		67	51	133	97
13-18 hours.....	600 or less	57.5	76.2	32.6	54.3
	601-1,200	27.5	9.5	46.1	30.4
	Over 1,200	15.0	14.3	21.3	15.3
Number of cases.....		40	21	89	59
Over 18 hours.....	600 or less	71.7	76.6	32.8	35.5
	601-1,200	17.0	20.0	43.1	39.5
	Over 1,200	11.3	3.4	24.1	25.0
Number of cases.....		53	30	195	104
Total number of cases.....		211	167	491	312

* The data of the table, except the number of cases, are percentages of the number of cases.

book reading. At first glance there might appear to be a slight concentration in Georgia cases reporting six hundred pages or less, when the amount of work is over twelve hours per week, but the data are spotted in this respect. Moreover, it was shown from Table 2 that in any case Georgia students report relatively little leisure-time book reading. The data for Illinois (Table 3)

show comparable percentage distributions among the different reading categories, without regard to the amount of nonschool work reported.

Radio and leisure-time reading.—One might expect the presence of a radio in the home to influence the amount of leisure-time reading. The data for both states (see Table 4) indicate

TABLE 4
INFLUENCE OF A RADIO IN THE HOME ON THE AMOUNT
OF BOOK READING DONE*

RADIO IN THE HOME	SEX OF STUDENTS	RELATION OF BOOK READING TO TIME PER DAY SPENT READING NEWSPAPERS											
		Pages of Book Reading Done by Students Who Spend 15 Minutes or Less on Newspapers				Pages of Book Reading Done by Students Who Spend 16-30 Minutes on Newspapers				Pages of Book Reading Done by Students Who Spend Over 45 Minutes on Newspapers			
		600 or Less	601-1,200	Over 1,200	No. of Cases	600 or Less	601-1,200	Over 1,200	No. of Cases	600 or Less	601-1,200	Over 1,200	No. of Cases
Georgia, with radio.....	Boys	66.6	26.7	6.7	30	68.5	26.8	4.7	127	68.7	27.8	3.5	115
	Girls	73.0	23.9	3.1	63	72.1	24.4	3.5	172	62.2	30.6	7.2	111
Georgia, without radio.....	Boys	70.6	23.6	5.8	17	83.7	14.5	1.8	55	84.1	12.8	3.1	31
	Girls	62.2	27.0	10.8	37	85.0	13.8	1.2	87	74.5	17.7	7.8	51
Illinois, with radio.....	Boys	33.3	55.6	11.1	81	37.6	54.5	7.9	101	26.4	65.7	7.9	38
	Girls	36.7	53.1	10.2	98	39.0	49.1	11.9	118	51.9	33.3	14.8	27
Illinois, without radio.....	Boys	52.6	40.9	6.5	93	42.2	46.7	11.1	135	55.3	36.0	8.7	103
	Girls	36.1	43.1	20.8	72	44.7	46.6	8.7	103	41.3	47.8	10.9	92

* The data, except the number of cases, are in percentages of the number of cases. Preliminary tabulation indicated very few students reporting thirty-one to forty-five minutes per day spent in reading newspapers. Hence this category was omitted from Tables 4 and 5.

that students with radios at home report more leisure-time book reading than do students without radios. Thus larger percentages of students without radios are shown in the columns indicating small amounts of book reading, and smaller percentages in the columns indicating larger amounts of book reading; particularly is this apparent from the groups of columns indicating more than fifteen minutes per day spent on newspapers. The data indicate no particular sex difference in regard to the influence of radio on leisure-time book reading.

In Georgia a much larger proportion of all students reporting radios also report more than fifteen minutes per day spent on newspaper reading than is the case with students not reporting radios. This situation, however, seems to be reversed in the case of Illinois students—a larger proportion of all students without radios report over fifteen minutes per day spent on newspapers. A more detailed tabulation than that appearing in the table revealed no consistent difference among the different high-school grades, so far as influence of radio on newspaper and book reading is concerned.

Apparently the homes which can afford radios are also the homes which can afford books for reading. The significance of this relationship becomes clearer when one recalls that high-school students, as here reported, prefer to do their leisure-time reading at home and in the evenings. If one considers the availability of newspapers as halfway between nothing and books for leisure-time reading, the economic factor seems more important in Georgia than in Illinois. For example, Georgia students who are without radios are also more likely to be without newspaper material which holds their interest more than fifteen minutes per day than are students with radios. In Illinois, on the other hand, the radio-owning students are less likely to spend over fifteen minutes per day on newspapers than are students without radios.

The data for Illinois students indicate that a much larger proportion of those without radios spend over forty-five minutes per day on newspapers than of those with radios. This fact, together with the comments of preceding paragraphs regarding book reading, suggests that among Illinois students the radio competes more with newspaper than with book reading. The same situation does not prevail in Georgia. A possible interpretation is that Georgia students who do not have radios at home have relatively little access to reading materials.

Size of family and leisure-time reading.—Size of family seems to make no consistent difference in the amount of book reading done (see Table 5). For both sexes and both states the data show roughly the same proportion of book reading in the

categories over six hundred pages for students who come from families of five or more children, as for students from smaller families. These data do not suggest, as is sometimes thought, that children from small families do more reading because they have fewer associates and playmates among siblings. Moreover, the reading done by girls in the larger families apparently does not suffer as a result of household duties often thought to be incumbent upon adolescent girls in large families.

It is sometimes felt that persons who do the most newspaper reading also do the most book reading. If that were the case, one would expect students who spend over forty-five minutes per day on newspapers to do more book reading than other students. The data of this study, on the whole, do not support this view; they show no consistent differences in this regard.

A rather interesting sex difference, however, appears in regard to newspaper reading. In both states a larger percentage of the girls than of the boys reported fifteen minutes or less per day of newspaper reading, whereas in each state a larger percentage of boys than of girls reported over forty-five minutes per day on newspapers. Thus of 410 Georgia boys reporting, 12.4 per cent reported fifteen minutes or less, 43.9 per cent reported sixteen to thirty minutes, and 43.7 per cent reported over forty-five minutes; whereas of the 584 Georgia girls reporting, 19.8 per cent reported fifteen minutes or less, 47.5 per cent reported sixteen to thirty minutes, and 32.7 per cent reported over forty-five minutes. Among Illinois students the differences are smaller, but follow the same trends. Of the 622 Illinois boys reporting, 21.1 per cent reported fifteen minutes or less, 42.8 per cent reported sixteen to thirty minutes, and 36.1 per cent reported over forty-five minutes; whereas of the 628 girls reporting 23.3 per cent reported fifteen minutes or less, 43.6 per cent reported sixteen to thirty minutes, and 33.1 per cent reported over forty-five minutes. The apparent greater interest of boys in newspapers suggests greater interest in current topics and perhaps reflects greater freedom of community association and contact allowed them. Perhaps these are reflections of adult differences between the sexes in newspaper-reading interest.

TABLE 5

RELATION BETWEEN NUMBER OF CHILDREN IN THE FAMILY AND AMOUNT OF NEWSPAPER AND BOOK READING DONE

SEX OF STUDENT	NUMBER OF CHILDREN IN THE FAMILY	TIME PER DAY SPENT READING NEWSPAPERS												
		Pages of Book Reading Done by Students Who Spend 15 Minutes or Less on Newspapers			Pages of Book Reading Done by Students Who Spend 16-30 Minutes on Newspapers			Pages of Book Reading Done by Students Who Spend Over 45 Minutes on Newspapers			600 or Less	601-1,200	Over 1,200	No. of Cases
		600 or Less	601-1,200	Over 1,200	600 or Less	601-1,200	Over 1,200	600 or Less	601-1,200	Over 1,200				
Georgia boys...	1	83.3	16.7	...	6	92.9	7.1	...	14	80.0	...	20.0	5	
	2	64.3	34.3	21.4	14	66.7	24.2	9.1	33	61.5	20.6	17.9	39	
	3-4	41.7	8.3	35.0	12	67.1	22.9	10.0	70	74.1	20.3	15.6	64	
	5-6	100.0			7	63.2	21.0	15.8	38	69.8	11.6	18.6	43	
	7 or more	50.0	41.7	8.3	12	68.0	16.0	16.0	25	60.8	35.6	3.6	28	
	Total (percentage)	62.8	23.5	13.7	...	68.4	20.5	11.1	...	64.8	20.1	15.1	...	
Georgia girls...	1	66.7	16.7	16.6	6	60.9	21.7	17.4	23	70.6	17.6	11.8	17	
	2	73.9	17.4	8.7	23	81.6	15.8	2.6	38	60.0	22.5	17.5	40	
	3-4	61.7	25.5	12.8	47	75.8	15.8	8.4	95	55.4	24.6	20.0	65	
	5-6	86.5	9.0	4.5	22	56.9	30.8	12.3	65	54.1	37.8	8.1	37	
	7 or more	61.1	38.9	...	18	80.4	16.1	3.5	56	71.9	18.7	9.4	32	
	Total (percentage)	69.0	22.4	8.6	...	71.9	19.8	8.3	...	60.2	25.1	14.7	...	
Total for Georgia (percentage)...														
		67.0	22.8	10.2	...	70.5	20.1	9.4	...	62.5	22.7	14.8	...	
Illinois boys...	1	30.8	38.4	30.8	13	50.0	35.0	15.0	20	28.6	47.6	23.8	21	
	2	44.5	44.4	41.1	36	40.7	49.1	10.2	59	37.1	28.6	34.3	35	
	3-4	43.9	43.9	12.2	41	34.1	43.9	22.0	82	37.9	38.9	23.2	95	
	5-6	55.6	25.9	18.5	27	40.0	43.3	316.7	60	31.4	42.9	25.7	35	
	7 or more	42.9	50.0	7.1	14	40.0	40.0	20.0	45	35.9	33.3	30.8	39	
	Total (percentage)	45.1	40.4	14.5	...	39.1	43.6	17.3	...	35.6	37.7	26.7	...	
Illinois girls...	1	11.8	52.9	35.3	17	28.0	56.0	16.0	25	35.3	52.9	11.8	17	
	2	37.0	44.5	518.5	27	38.4	38.5	523.1	52	30.5	38.9	30.6	36	
	3-4	26.8	43.9	29.3	41	40.4	34.9	24.7	89	45.5	32.4	22.1	68	
	5-6	29.6	37.0	33.4	27	36.2	46.4	17.4	69	44.7	39.3	16.0	56	
	7 or more	41.2	26.5	32.3	34	35.9	40.0	23.1	39	48.4	25.8	25.8	31	
	Total (percentage)	30.8	39.7	29.5	...	37.2	41.3	21.5	...	42.3	36.1	21.6	...	
Total for Illinois (percentage)...														
		39.6	40.0	22.4	...	38.1	42.4	19.5	...	38.8	37.0	24.2	...	

SUMMARY

1. Students of both sexes and both states prefer to do their leisure-time reading at home rather than in school or in public libraries. This place preference is related to the time preference of evenings, or perhaps of week ends, as contrasted with vacant hours at school or after-school hours. When leisure-time book reading alone is considered, there is greater preference for week-end reading as contrasted with evening reading.
2. Georgia students do less leisure-time book reading than do Illinois students. Climate, outdoor recreations, and availability of reading materials are suggested as explanatory factors.
3. In Illinois girls do more leisure-time book reading than boys, but in both states boys spend more time in newspaper reading.
4. There seems to be no consistent difference between the amount of leisure-time book reading done by freshmen and that done by seniors.
5. Illinois students report more nonschool work than do Georgia students. The amount of such work reported, however, does not seem to influence the amount of leisure-time book reading done.
6. Students with radios in the home report more book reading than do students without radios. However, there seems to be some competition for time, particularly among Illinois students, between the radio and the newspaper. There is no significant sex difference in radio influence.
7. Size of family does not seem to have any definite influence on amount of leisure-time reading done.

THE LIBRARY OF GIBBON THE HISTORIAN

JAMES WESTFALL THOMPSON

IN THE course of a study of the life and literary labors of the great historian Edward Gibbon, the two hundredth anniversary of whose birth, April 27, 1737 (Old Style), occurred this spring, I have come upon interesting information concerning the nature, extent, and fate of Gibbon's library. Most of this information has come from the books out of which the great *scriptor rerum gestarum* built the stately structure of *The decline and fall of the Roman Empire*, the first volume of which was published in 1776, a year also made momentous by the publication of Adam Smith's *The wealth of nations* and by the death of Hume.

No man was ever more a student than Gibbon. He was never so happy as when he was among his books. He began to collect books early in life and in later years remembered the thrill he felt when exchanging "a bank-note of twenty-pounds for the twenty volumes of the *Memoirs of the Academy of Inscriptions*, nor would it have been easy by any other expenditure of the same sum to have procured so large and lasting a fund of rational amusement."¹ He wrote in 1763 from Lausanne to his father: "I have got a few books together." In 1773, when settled in what he styled his "little palace" in Bentinck Street, he wrote to his stepmother that "all the notions I ever formed of a London life in my own house and surrounded by my books, with a due mixture of study and society, are fully realized." In 1776, the year in which the first volume of the *Decline and fall* appeared, he wrote from Bath to Holroyd (later Lord Sheffield): "I long to get back to the library in Bentinck Street, where I shall speedily, but not hastily, undertake the second volume." In June, 1781, in a letter to Lady Sheffield, he writes: "The

¹ In his *Journal* he refers to the acquisition of the additional volumes.

town is empty, but I am surrounded with a thousand old acquaintances of all ages and characters, who are ready to answer a thousand questions which I am impatient to ask. I shall not be easily tired of their company." And years later, in his *Memoirs*, Gibbon wrote: "The miseries of a vacant life were never known to a man whose hours were insufficient for the inexhaustible pleasures of study." In another place he says that his library is "the best comfort of my life."

It is singular that, during this long residence in London, Gibbon seems to have made no effort to use the library of the British Museum—even at that time no negligible collection—but purchased every book of which he felt the need; whereas Hume, as librarian of the Advocates' Library in Edinburgh, was able to spare his purse entirely. When, in 1783, Gibbon removed to Lausanne, where he wrote the fifth and sixth volumes, he took his library with him, which he estimated at that time "to the number of between six and seven thousand volumes." At Lausanne, however, he used the library of the local academy "as his own," and "derived some occasional succour from the public collections of Berne and Geneva."

Gibbon was an intelligent book-buyer. As he records:

I may allow myself to observe that I am not conscious of ever having bought a book from a motive of ostentation; that every volume, before it was deposited on the shelf, was either read or sufficiently examined, and that I soon adopted the tolerating maxim of the elder Pliny: *nullum esse librum tam malum ut non ex aliqua parte prodesse.*

When Gibbon returned to London in 1788, after the completion of his *History*, he left his library housed at Lausanne. In intervals of relaxation he had begun to make a catalog of his collection, but did not complete it. This catalog is a bibliographical curiosity, for the entries, in his own bold and clear handwriting, are made on the backs of playing-cards. The names of authors and the titles of the books are set forth in full, along with the size, number of volumes, and place of publication. This precious relic is now among the treasures of the British Museum, which acquired it in 1897. The last card bears the figures 2,675.

In his will,² written with his own hand and dated October 1, 1791, Gibbon expressed the wish that his library be sold. Lord Sheffield, his friend and executor, strongly protested and told Gibbon that it was his duty to bequeath the library to him for custody and preservation at Sheffield Place. Gibbon's reply will be appreciated by every book-hunter who avidly reads sales catalogs or haunts the auction rooms of the great London book-sellers:

I am a friend to the circulation of property of every kind, and besides the pecuniary advantage of my poor heirs, I consider a public sale as the most laudable method of disposing of it. From such sales my books were chiefly collected, and when I can no longer use them they can be again culled by various buyers according to the measure of their wants and means. If, indeed, a truly liberal public library existed in London, I might be tempted to enrich the catalogue and encourage the institution: but to bury my treasure in a *country* mansion under the key of a jealous master! I am not flattered by the "Gibbonian Collection," and shall own my presumptuous belief that six quarto volumes may be sufficient for the preservation of that name.

From the article providing for the sale of his library Gibbon excepted some valuable sets of books which he bequeathed to the Academy of Lausanne. As they are enumerated in the instrument, these were:

"Thuani Historia," seven volumes in folio; "Erasmi Opera," ten volumes in folio; "Meursii Opera," twelve volumes in folio; the first edition of the "Biographia Britannica," seven volumes in folio; the Venice edition of the Byzantine writers; and all the works of Muratori.

Years ago, before I learned of the existence of the catalog in the British Museum, I conceived the idea of reconstructing Gibbon's library from the references in the *Decline and Fall* and the allusions in his *Journal* and his *Memoirs*. In 1903 I examined his own playing-card catalog—with what interest may be imagined. The most singular thing which struck me then was the fact that Gibbon had no complete set of his own work, the

² Gibbon's will and playing-card catalog of his library were loaned for exhibition purposes to the Royal Historical Society in 1894, when it celebrated the one-hundredth anniversary of Gibbon's death. (M. De Charière de Sévery, who represented, by descent, the intimate friend of Gibbon's last years at Lausanne, was in possession of these items, and it was from him that the British Museum later acquired them.) Other exhibits on this occasion were two bottles of Madeira wine from Gibbon's wine cellar and Gibbon's family Bible, the latter loaned by General Meredith Read.

only entries with its title being one quarto volume of the first edition of 1776 and three of the edition 1777; two of the Dublin pirated edition of 1776, and three of the fourth edition of 1781. But he carefully preserved most of the books and pamphlets in which he was attacked. There are several editions of Pascal's works and of Montaigne's *Essais*; both writers were favorites with him. Greek and Latin classical authors are well represented, as well as the authorities cited in his great work.

Contrary to what one might expect, the library covered a wide variety of subjects and was far from being an exclusively historical collection. Among the French, Italian, and Spanish works were Boccacio's *Decamerone*; the *Orlando Furioso*, with a French translation of it; the *Orlando Inamorato*, folio edition; *Don Quixote*, the four-volume edition of the Real Academia Española, Madrid, 1782; Bayle's *Dictionnaire*; Beccaria's *Dei delitti e delle pene*, a book which through Voltaire's praise had a profound influence on the reform of criminal law in the eighteenth century; the works of Brantôme, Boileau, Montesquieu, Beaumarchais, Buffon, Voltaire, and Rousseau; Massillon's *Sermons* in fifteen volumes; and a large collection of French plays. Gibbon at one time must have been greatly interested in colonial history, for he had William Smith's *A new voyage to Guinea* (1745), Henri Joutel's *A journal of the last voyage perform'd by Monsr. de la Sale to the Gulph of Mexico* (1714), Le Page Du Pratz's *Histoire de la Louisiane* (Paris, 1758), Forster's *History of the voyages and discoveries made in the North* (1786) and his *Observations made during a voyage round the world* (1778), Henry Ellis' *Voyage to Hudson's Bay by the Dobbs galley and California in the years 1746 and 1747 for discovering a North-West Passage* (1748), Anson's *Voyages*, Cook's *Second voyage*, Harrington's *Oceana*, Hakluyt's *Voyages*, Purchas' *Pilgrimages*, and Adair's *History of the American Indians* (1775). Two of Gibbon's most precious books were Herrera's *America*, six volumes, in English translation; and Casiri's *Bibliotheca Arabic-Hispana Escurialensis Librorum omnium MSS quos arabice compositos Bibliotheca Escurialensis complectitur recensio*, two

volumes, Madrid, 1760. This is a catalog of the Arabic manuscripts in the Royal Library at Madrid, and a very important work on Arabic bibliography. These two works were purchased at the Jarvis Sale (see farther on) by Mr. Edward D. Ingraham, of Philadelphia, of the dispersal of whose library I can find no information.³

Among English authors and works, listing them alphabetically, we find: Addison's *Evidences of the Christian religion* (with a French translation); Bacon's *Essays*; Bell's *British theatre*; Blair's *Rhetoric*; Bolingbroke's works; Burnet's *History of his own times*; Butler's *Hudibras*; Chesterfield's *Letters*; Churchill's *Poems*; Clarendon's *History*; Cowley's *Poems*; Dugdale's *Monasticon*; Evelyn's *Sylva*; Fielding's novels; Hooker's *Ecclesiastical polity*; Hume's works; Johnson's *Dictionary* and other works; Locke's works; Mason's *Poems and life of Gray*; Ossian; Percy's *Reliques*; Raleigh's *History of the world*; Reynold's *Discourses*; Robertson's works; Shaftesbury's *Characteristics*; Shakespeare's dramas, in the editions of Theobald, Johnson, and Malone; Sherlock's *Sermons*; Smith's *Moral sentiments*; Hughes's *Spenser*; the works of Dryden, Sterne, Swift, Algernon Sidney, Temple, Pope, and Walpole, and Dr. Watts *On the mind*. Gibbon duly noted that his edition of the Bible was printed in London in 1663.⁴

Sheffield was a dilatory and negligent executor. For two years the library intrusted to his care remained sealed at Lausanne, as in a tomb. One is reminded of the wail of Ammianus Marcellinus, the last Roman historian, over the closure of the great public libraries in Rome in the fourth century: *Bibliothecis sepulcrorum in perpetuum clausis* ("the libraries were shut forever like tombs"). In 1796 the rich and eccentric "Vathek" Beckford bought it, "sight unseen," for one thousand pounds (another statement says £950) in order "to have something to read when I passed through Lausanne." After six weeks Beck-

³ Letter from Mr. A. S. W. Rosenbach.

⁴ Some, but not all, of the foregoing titles have been taken from an account of this card catalog by Mr. W. Fraser Rae in the *Athenaeum*, June 5, 1897.

ford left Lausanne as abruptly as he had arrived. "I read myself nearly blind," he later said, and "I never saw it after turning hermit there."⁵

Except for four or five volumes which he carried away with him, Beckford gave Gibbon's library to a local Swiss physician named Scholl, who had been Gibbon's doctor. A Mr. Brown some time afterward, through Scholl, offered Beckford £2,000 for Gibbon's library; but Beckford replied: "Je ne suis pas marchand de livres." In 1829 Scholl sold half of Gibbon's books to an English clergyman living in Switzerland, the Rev. John Walter Halliday, who installed them in the tower of an old château in the village of Clées. The other half of the library was disposed of piecemeal by a bookseller in Geneva. In May, 1831, an English tourist wrote to a friend: "Gibbon's library is now on sale here and might be had probably for £800." This, of course, refers only to one-half of the whole collection. This gentleman, whose initials were H. L. L., examined the books before they were put on sale, searching for volumes with Gibbon's autograph in them, but found only three. One was a little Tonson's *Caesar*, which had "Edward Gibbon, of Magdalen College, Oxford. April 9, 1753" written in it; the other book was Necker's famous *Rapport sur les finances*, the issuance of which made such a sensation on the eve of the French Revolution; it was a presentation copy, handsomely bound, in which Gibbon had written: "à M. Gibbon de la part de l'auteur"; the third book with Gibbon's autograph was a copy of Hayley's *Poems*. Mr. H. L. L. also purchased thirteen other books.

Quantities of Gibbon's books were sold at Lausanne in the following years. In the Library of Congress there is a:

Catalogue des livres de la bibliothèque d'Ed. Gibbon, mise en vente à Lausanne. Lausanne, Impr. de S. Delisle, 1833. 47 p. "Un nouveau catalogue qui fait connaître d'une manière plus exacte tout ce qui reste de cette précieuse collection."—p. [2]. Priced.

⁵ Cyrus Redding, "Recollections of the author of *Vathek*," *New monthly magazine*, LI, 308; *Notes and queries*, No. 192 (July 2, 1853), p. 88.

About four hundred of these books were bought by an American clergyman, the Rev. Samuel Farmar Jarvis, of Connecticut.⁶ Some of the books had Gibbon's name, E. Gibbon, printed in them in Roman letters; others had his coat-of-arms. Mr. Jarvis died at Middletown, Connecticut, on March 26, 1851. His library of about ten thousand volumes, chiefly in ecclesiastical history and antiquities, but with a liberal sprinkling of the Greek and Latin classics, was sold at auction by Lyman and Rawdon, auctioneers, in New York on October 14, 1851.⁷

It is shameful to be compelled to record that Gibbon's library was wantonly dispersed and many of the books in it made the sport of chance. In 1838 a traveling Englishman picked up some of Gibbon's books out of a basketful on sale in the office of the Religious Tract Society in Lausanne. "Edward Gibbon," printed on a small label, was pasted in each of them. As late as 1892 an English tourist visiting in a villa at Ouchy found a child on the floor of the drawing-room building a castle out of blocks and some of Gibbon's books. The mother explained that some years before "a portion of Gibbon's library had fallen into her possession, and as they seemed to be dry and useless (!) she permitted her children to play with them." There were twenty-two volumes with Gibbon's name and arms in them, and fifteen with his name only. It developed that these derelicts were re-

⁶ Jarvis was a graduate of Yale, taking his B.A. in 1805. Later he got an M.A., probably without examination; and he had the degree of D.D. from the University of Pennsylvania in 1819, and LL.D. from Trinity in 1837. He was professor of biblical learning at the General Theological Seminary from 1819 to 1820, and professor of oriental literature at Trinity College from 1835 to 1837. Information kindly given by Mr. Andrew Keogh, librarian of Yale University Library.

⁷ There are copies of that auction catalog in the American Antiquarian Society, in the Boston Public, in the New York Public libraries, and two copies in Yale University Library. Through the kindness of Mr. K. D. Metcalf, chief of the reference department of the New York Public Library, I have been furnished a photostat copy of this catalog. Unfortunately, there is no indication of which books in this collection once belonged to Gibbon. The catalog has been annotated by some person who has given the name of purchaser and the price in very many instances. Among the buyers were George Bancroft, George Ticknor, Richard Grant White, David A. Wells, John W. Draper, Henry Drisler, Charlton T. Lewis, General Theological Seminary, Yale College, Columbia College, Brown University, and the University of Pennsylvania.

mains from Mr. Halliday's purchase. He sold his property in Switzerland in 1845 and returned to England.

Books from Gibbon's library have occasionally turned up in the second-hand book trade ever since the great dispersion. Some papers of Gibbon and Lord Sheffield were disposed of by a London bookseller about 1907, to Mr. Walter Sichel, among which were found parts of the *Glenbervie journals*, which he published in 1910. Within the last few years some of Gibbon's books have found their way into the hands of London booksellers. Fifty-seven items were offered for sale in 1935 by Messrs. Maggs Brothers of London (Catalog 610, Nos. 542-99). A few years before, Messrs. J. Pearson and Company (Catalog 500, Item 206) sold a remarkable collection of original holograph manuscripts, letters, and documents of Gibbon, among them his original holograph *Diary*, and the proof sheets, with Gibbon's own corrections, of pages iii-vi of the Preface to the first edition of the last volume of the *History of the decline and fall of the Roman Empire*. Last spring Gibbon's own set of the *Mémoires de l'Académie royale des inscriptions et de belles-lettres*, Volumes I-XLIII (1736-86), with his bookplate in every volume, was offered for sale by a Pall Mall bookseller for £25.

It is melancholy to reflect that the library of the greatest historical scholar not only of England but of the English-speaking world should not have been preserved and found repose in the British Museum, which too tardily for much success has lately begun the task of collecting Gibbon's remains. How many of Gibbon's books it has acquired within recent years, as they have from time to time come into the market, I do not know. To reconstruct Gibbon's whole library is now impossible; but some enthusiastic bibliophile, possessed of a long and deep purse, might yet be able to gather together in one place a considerable number of Gibbon's books and manuscripts. Greatest of these remains, of course, would be the manuscript of *The decline and fall of the Roman Empire*, the destiny of which no man knows.

The publication of his *History* revived the memory of Gibbon's first literary performance fifteen years earlier—his *Essai*

sur l'étude de la littérature, a substantial but juvenile work of seventy-eight chapters. The book was printed "à Londres chez T. Becket et P. S. de Hondt, 1761,"⁸ and the next year a new edition published at Geneva extended the fame, or at least the circulation, of the book. "In England," relates Gibbon, "it was received with cold indifference, little read and speedily forgotten," until he became famous. Then, "when a copy of the original edition has been discovered in a sale, the primitive value of half-a-crown has risen to the fancied price of a guinea or thirty shillings."

Bibliophiles seem to have forgotten this book entirely or else have long since despaired of finding an example. I have seen but one copy advertised in any bookseller's catalog. But an example of the English translation published in 1764 now and then appears.⁹

Somewhere in this country there must be from four hundred to five hundred books which once belonged to Gibbon. There are a few examples also of the first edition of *The decline and fall of the Roman Empire*. Richest possessor is Harvard University Library, which has two complete sets and one incomplete set of the first edition; moreover, one of these complete sets, which came to Harvard in the Amy Lowell Collection, is a presentation copy from Gibbon himself to his aunt, Mrs. Catherine Porter, dated February 23, 1781, with his signature in Volume II. Her signature is found in Volumes I-IV. Harvard also possesses Volume I of the second edition, a presentation copy from the author, with autograph inscription, to I. Baker Holroyd (later Lord Sheffield) with his bookplate.¹⁰ Yale University Library has one copy of the first edition of Gibbon.¹¹ Washington possessed a complete set of the first edition of the *Decline*

⁸ Gibbon's presentation copy to Lord Shelburne was sold at Sotheby's, November 19, 1894, for £1 5s.

⁹ GIBBON (Edward) AN ESSAY ON THE STUDY OF LITERATURE, written originally in French, by Edward Gibbon, Jun., Esq.; now First translated into English; FIRST EDITION, cr. 8vo, new half mottled calf, front margins of six leaves neatly repaired, otherwise a fine tall and clean copy, £3 10s. 1764

¹⁰ Information kindly provided by Mr. Walter B. Briggs, acting librarian of Harvard College Library.

¹¹ Information kindly furnished by Mr. Andrew Keogh, the librarian.

and fall. This precious set, with Washington's autograph on the title-page of each volume except the first, fell into the hands of Bishop John F. Hurst, a famous book-collector (though the fact is unobserved in the article on him in the *Dictionary of American biography*) whose library was sold at auction in New York in May, 1904. At this auction the set was sold to an unknown purchaser for \$1,626. Who bought it? The latest recorded sale in London of the first edition is for the year 1894, when the price was £160.¹² Examples of the first edition are very rare in this country. The New York Public Library has none; but it does possess Gibbon's *Cicero*, in nine volumes, which was bought at the Jarvis sale (Item 386). Mills College, California, has three volumes of the first edition of the *Decline and fall* and two books once in Gibbon's library: L'Abbé Fleury's *Les mœurs des Israelites* (Paris, 1712) and A. Gislenii Busbequii's *Omnia quae extant* (Leyden, 1633). Gibbon's copy of Blackstone is in the library of the School of Jurisprudence at the University of California (Berkeley). In Brown University Library are Spanheim's *De praesentia et usu Numismatum* (Amsterdam, 1727; 2 vols.) and R. Chandler's *Travels in Greece* (Oxford, 1776).

The late great British imperialist, Cecil Rhodes, was an admirer of Gibbon to the point of idolatry. According to a recent biographer:

He loved him for the majesty of his conception, for his language, and still more for the connection he traced between Gibbon's account of the grandeur of imperial Rome and his own idea of Great Britain's imperial mission. Talking of Gibbon during a country-house visit in England, he expressed regret that his knowledge of Latin and Greek did not enable him to read all the authorities quoted in the *Decline and Fall*, and there were no good translations available. On his host's advice he went to see if Mr. Humphrey's, of Hatchard's, could help him to get the translations he needed, and found he would undertake it. . . . Scholars were engaged to translate, typists to copy, and clerks to index the required versions. . . . Rhodes perhaps hardly knew what he had let himself in for: with Suetonius and Tacitus and such like he was well pleased, but when it came to the apparently endless series of the complete works of the Fathers of the Church, from whom Gibbon quarried, he had to cry halt, and issued an order that the Fathers must cease. Such as it is, the collection cost him some £8000.¹³

¹² In recent catalog from London a first edition is offered for £35.

¹³ Basil Williams, *Cecil Rhodes* (London, 1921), p. 223.

If Rhodes had been better advised, he would have learned that English translations existed of all the Greek and Roman classical writers from whose works Gibbon drew, and that the works of all the patristic writers were also available in translation. It is a pity that, with his enthusiasm and his wealth, he did not endeavor to acquire possession of the books which once were in Gibbon's library, numbers of which from time to time have appeared for sale in the shops of London booksellers. Even at this late day, intelligence, diligence, and money could do much in this particular. There are many collectors of the works of Johnson, Goldsmith, Lamb, and others. But during all the years in which I have tracked Gibbon through the snows of yesteryear, I have never met with a passionate pilgrim along the highways of literature who searched if haply he might find some of the books which once were on the shelves of Gibbon's library and which his hands had handled.

EVALUATION OF PERIODICALS FOR ELECTRICAL ENGINEERS

CHARLES F. DALZIEL

UNDoubtedly every educational and research institution is faced with the problem of locating reliable, adequate, and up-to-date sources of information. Standard textbooks and important periodicals are the basic sources. Since textbooks present in permanent form generally accepted theories or facts which probably first appeared in periodical publications at a much earlier date, the latter are the most important sources of current information.

Every educational institution, particularly those offering graduate work and research, must have available the most important technical periodicals containing the results of research throughout the world. In addition, all institutions and practicing engineers should subscribe to the most important trade journals. Since the latter publications may not include articles of a highly technical nature, it is apparent that methods must be devised to evaluate these two kinds of publications. In every field of science the passage of a few years sees the birth of new periodicals and changes in the makeup of others which may or may not justify a continuation of their subscription. This paper discusses methods of evaluating periodicals and presents some of the results of an investigation made at the University of California. The objects of the investigation were: (1) to determine a list of the most important periodicals for electrical engineers; (2) to determine which periodicals should be discontinued; (3) to determine which important new or unknown periodicals might be purchased with the funds so released; and (4) to determine a practical solution of the general problem of evaluating scientific journals. The task of evaluating periodicals is a difficult one, and a brief description of several methods is given in the paragraphs immediately following.

1. *Published indexes.*—A tabulation of the names of periodicals obtained from published indexes or abstracts is of questionable value, since such indexes contain references to practically all of the articles included in certain accepted publications. A check of this nature merely indicates the most frequent or voluminous publications covered in the index, without subsequent consideration being given to the value of the individual articles listed.

2. *Individual rating.*—In this method all periodicals under consideration are examined, and those which are believed to be the most valuable are selected. While this method will probably continue to be the most used, it has certain disadvantages: (1) much time and patience are required; (2) unknown periodicals cannot be located easily; (3) sample copies of all the periodicals are required; and (4) it is probable that subscription lists will reflect the personal opinions of the compiler.

3. *Current use.*—It is believed that current use is a criterion for determining the value of periodicals. The demand for a given issue decreases materially two or three years after publication and becomes almost negligible in ten years. This decrease is probably due to the rapid progress of the science and to the fact that within a few years valuable technical contributions find their way into textbooks.

In an attempt to evaluate periodicals by this method slips similar to that shown in Figure 1 were attached to all magazines covering the field of electrical engineering. The results from this part of the study were disappointing as it was soon found that a continually decreasing response was being obtained. A comparison of indicated response and actual reading-room use of a few of the more popular magazines indicated that this simple procedure would not give reliable results. It was concluded that a tabulation made from library call slips, even though stack and reading room use was not recorded, would probably give the most accurate indication of current use. It is believed that this method is unsatisfactory for rating highly technical periodicals, but it is the only method devised for evaluating magazines of a popular nature in this field.

4. *Reference counting.*—By this method all the references contained in a selected list of periodicals are counted and tabulated in the order of decreasing totals. This method has been used in previous studies,¹ and it is believed to be the most powerful yet

The use of certain periodicals is being checked.

If you read (NOT THUMB THRU) one or more articles in this issue, please indicate by noting date below.

FIG. 1.

proposed. Ordinarily, library subscription lists are seasoned with the particular needs, likes, and dislikes of a small library committee; obviously, this method of selection yields a list free

⁴ J. K. McNeely and C. D. Crosno, "Periodicals for electrical engineers," *Science*, LXXXII (1930), 81-84; E. S. Allen, "Periodicals for mathematicians," *Science*, LXXX (1929), 592-94; P. L. K. Gross and E. M. Gross, "College libraries and chemical education," *Science*, LXV (1927), 385-89.

from the influences of either subscription policies or the personal feelings of the compiler.

The validity of the method hinges on the assumption that the most important technical contributions are based on previously published work. Therefore, periodicals containing valuable articles should contain a number of references to other important articles. A tabulation of the references obtained from a representative number of periodicals covering the field should show their relative value. Owing to different editorial policies, number of articles per issue, issues per year, and the type of articles published, the results of any such tabulation must be interpreted with care. The actual location of any periodical in a list prepared by this method is not an index of absolute value; the relative location, however, should be of assistance in determining the importance of publications.

Since references from foreign to English publications, and vice versa, may be taken as indicative of an author's education and widespread knowledge of his subject, it is probable that articles including these references represent worthy contributions. It is the writer's opinion that these references are more valuable in determining the value of periodicals than references to other articles in the same language; perhaps they should be given double weight in obtaining the totals. Since this suggestion is subject to argument, these references, although tabulated separately, are treated here the same as the others.

In this investigation, made at the University of California, a list of all the engineering periodicals purchased by the General Library, and by the College of Engineering Library, and the best fifty periodicals for electrical engineers,² was circulated among members of the department of electrical engineering for rating. The results were expressed as the total score divided by the number of individuals reporting. The results proved interesting but were difficult to interpret. This procedure indicated the most important periodicals, and these were used for the reference count in which 20,322 references were taken from 20 different periodicals. The results of the investigation are arranged in

² McNeely and Crosno, *op. cit.*

four tables. A list of 48 foreign journals, obtained from tabulating the references found in 9 foreign and 11 English-language periodicals is given in Table 1. A tabulation of foreign journals obtained from the references found in the 11 English-language periodicals is given in Table 2. A list of 60 English periodicals obtained from the references found in the 9 foreign and the 11 English magazines is given in Table 3. The list of English journals obtained from the foreign references is given in Table 4. The lists contain a total of 108 periodicals—60 in English, and 48 published in foreign languages. Tables 2 and 3 should be of special interest to English-speaking institutions, while Tables 1 and 4 should be of value to institutions or engineers in foreign countries.

It is apparent from inspection of Tables 1 and 3 that, in general, the references to the same journal as that in which the citation appears greatly exceed the references to any other single publication. If these references were included in obtaining the totals, the position of most of the periodicals would be materially changed. It is obvious that this change in position represents a fictitious change in value which is eliminated if the references to the same publication are not used in obtaining totals. With these facts in mind, these references were recorded but not counted in obtaining the lists presented here.

The following precautions were taken in this study: (1) In order to allow for radical differences in editorial policies, styles, customs, and languages, periodicals published in foreign languages have been tabulated separately. (See Tables 1 and 2.) (2) All references to the same publication have been recorded but not counted in obtaining the totals. This was done to eliminate criticism regarding any undue advantage of the periodicals used for reference counting. (3) In order to limit the references to fields associated with electrical engineering, the periodicals used for reference counting were the available publications selected from those receiving the highest faculty rating. (4) In order to further limit the references to this field, all periodicals on the final lists—i.e., Tables 1 and 3 (with one or two excep-

TABLE 1
TOTAL REFERENCES TO FOREIGN JOURNALS

Periodical	No. of Issues per Year	Académie des Sciences, <i>Comptes rendus</i>	Elektrotechnische Zeitschrift	Archiv für Elektrotechnik	Revue générale de l'Électricité	Physikalische Zeitschrift	Zeitschrift für Physik	Hochfrequenztechnik und Elektroakustik	Annalen der Physik	Zeitschrift des Vereins deutscher Ingenieure	English References to Foreign Magazines	Total References to Foreign Magazines
1. <i>Annalen der Physik</i> (Gr.)	24	63	22	21	12	199	312	302 (983)	14	(404)	3	349
2. <i>Zeitschrift für Physik</i> (Gr.)	24	55	33	26	19	177	15	328	9	3	280	985
3. <i>Physikalische Zeitschrift</i> (Gr.)	24	21	23	10	20	(236)	177	15	320	3	152	520
4. <i>Archiv für Elektrotechnik</i> (Gr.)	12	27	159	(180)	1	13	49	16	12	2	77	356
5. <i>Zeitschrift für physikalische Chemie</i> (Gr.) (Abteilungen A)	*	71	2	.....	1	95	49	1	61	.....	41	321
(Abteilungen B)												
6. <i>Zeitschrift für technische Physik</i> (Gr.)	12	.....	48	32	11	43	43	23	21	28	60	308
7. <i>Naturwissenschaften</i> (Gr.)	52	9	4	5	11	88	76	5	22	.....	76	296
8. <i>Académie des Sciences, Comptes rendus</i>	52	(1,333)	1	1	91	12	47	9	13	2	96	263
9. <i>Proceedings of the Koninklijke Akademie van Wetenschappen te Amsterdam</i> (Du.)	*	38	92	19	.....	.....	.....	.....	.....	.....	39	188
10. <i>Elektrische Nachrichten Technik</i> (Gr.)	12	.....	36	7	.....	17	2	58	11	.....	42	173
11. <i>Elektrotechnische Zeitschrift</i> (Gr.)	52	.....	(759)	57	18	5	8	14	2	42	19	165
12. <i>Hochfrequenztechnik und Elektroakustik</i> (Gr.)	12	.....	17	4	1	26	2	(66)	16	5	90	161
13. <i>Elektrotechnik und Maschinenbau</i> (Gr.)	52	.....	76	23	7	4	2	1	.....	3	26	142
14. <i>Journal de physique et le radium</i> (Fr.)	12	53	3	.....	3	17	39	1	9	.....	33	135
15. <i>Zeitschrift für anorganische und allgemeine Chemie</i> (Gr.)	*	46	4	.....	6	12	.....	24	.....	26	118	
16. <i>Deutsche Gesellschaft für chemisches Apparatewesen</i> (Gr.)	24	105	2	.....	.....	.....	.....	.....	.....	.....	107	
17. <i>Elektrizitätsindustrie Mitteilungen</i> (Gr.)	24	.....	35	2	4	.....	.....	.....	30	1	72	
18. <i>Journal de chimie physique</i> (Fr.)	10	27	.....	.....	14	3	.....	4	.....	19	67	
19. <i>Wissenschaftliche Veröffentlichungen aus dem Siemens-Konzern</i> (Gr.)	*	5	12	13	.....	2	4	3	6	4	16	65
20. <i>Siemens Zeitschrift</i> (Gr.)	12	.....	32	10	4	1	1	7	.....	4	1	60
21. <i>Annales de chimie</i> (Fr.)	12	58	.....	6	.....	8	35	.....	8	.....	1	59
22. <i>Holmstica physica acta</i> (Fr.)	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	
23. <i>Zeitschrift des Vereins deutscher Ingenieure</i> (Gr.)	52	.....	42	2	1	3	4	.....	3 (750)	3	57	
24. <i>Zeitschrift für Elektrochemie und angewandte physikalische Chemie</i> (Gr.)	12	5	.....	3	2	3	27	.....	7	.....	10	57
25. <i>Schweizerische elektrotechnischer Verein</i> (Gr.)	24	.....	25	1	.....	4	.....	1	.....	16	45	
26. <i>Physica</i> (Du.)	10	.....	.....	1	.....	24	.....	1	.....	14	40	
27. <i>Zeitschrift für Instrumentenkunde</i> (Gr.)	12	.....	22	2	1	.....	.....	1	6	1	7	40

* Published at irregular intervals.

TABLE 1—Continued

Periodical	No. of Issues per Year	Academie des Sciences, Comptes rendus	Elektrotechnische Zeitschrift	Archiv für Elektrotechnik	Revue Générale de l'Électricité	Physikalische Zeitschrift	Zeitschrift für Physik	Hochfrequenztechnik und Elektrotechnik	Annalen der Physik	Zeitschrift der Vereine deutscher Ingenieure	English References to Foreign Magazines	Total References to Foreign Magazines
28. <i>Zeitschrift für Kristallographie</i> (Gr.)	12					7	14				14	35
29. <i>Société Francaise Electri- cien, Bulletin</i> (Fr.)	12				32						2	34
30. <i>Archiv für Technisches Messen</i> (Gr.)	12		11	20		1					1	33
31. <i>Allgemeine Elektricitäts- Gesellschaft, Mitteilungen</i> (Gr.)	12		16	4		2	3		7			32
32. <i>Revue générale de l'Électricité</i> (Fr.)	52		8	3 (472)		2	3		2	12	27	
33. <i>Kolloid Zeitschrift</i> (Gr.)	12	16	4							7	27	
34. <i>Telefunkentechnik</i> (Gr.)	4		3			4	10				9	26
35. <i>L'Électrotecnica</i> (It.)	24		5		13		4				3	25
36. <i>Deutsche Beleuchtungstechnische Gesellschaft</i> (Gr.)	24		18		2	1			1		1	23
37. <i>Mathematische Zeitschrift</i> (Gr.)	5	21		1								22
38. <i>Atti della Reale Accademia Nazionale dei Lincei</i> (It.)	*	9	1	4					2		2	18
39. <i>Mathematische Annalen</i> (Gr.)	*	13		2					1		1	17
40. <i>Sitzungsberichte der Preussischen Akademie der Wissenschaften Mathematisch-naturwissenschaftliche Klasse</i> (Gr.)	*	16									1	17
41. <i>L'onde électrique</i> (Fr.)	12	3									14	16
42. <i>dis frequenze</i> (It.)	6		3				5	1		5	14	
43. <i>Telegraphen und Fernsprechtechnik</i> (Gr.)	12		1	2					1		10	14
44. <i>Stahl und Eisen</i> (Gr.)	52		6			4					4	14
45. <i>Zeitschrift für angewandte Mathematik und Mechanik</i> (Gr.)	6					4			3	4	11	
46. <i>Revue d'optique théorique et instrumentale</i> (Fr.)		7									3	9
47. <i>Annales des postes, télégraphes et téléphones</i> (Fr.)	12										8	8
48. <i>Kamerlingh Onnes Laboratorium der Rijks-Universiteit te Leiden, Communications</i> (Du.)											7	7

tions)—were referred to by two or more publications. (5) In order to procure an up-to-date list, the journals used for reference counting were taken for the year 1934. Where certain issues were not available, the corresponding issues for 1933 were used. Magazines no longer published were omitted, and the present title only is given in cases where it was known that mergers or changes in title have taken place.

TABLE 2

REFERENCES TO FOREIGN JOURNALS FOUND IN ENGLISH-LANGUAGE JOURNALS

Periodical

	<i>Proceedings of the Physical Society</i>	<i>London, Edinburgh and Dublin philosophical magazine and journal of science</i>	<i>Journal of the Institution of Electrical Engineers</i>	<i>Electric journal</i>	<i>Electronics</i>	<i>Electrical engineering</i>	<i>Journal of the Franklin Institute</i>	<i>General Electric review</i>	<i>Bell System technical journal</i>	<i>Proceedings of the Institute of Radio Engineers</i>	<i>Physical review</i>	Total English References to Foreign Magazines
1. <i>Annalen der Physik</i>	37	26				15	5	1		16	10	349
2. <i>Zeitschrift für Physik</i>	12	28				34	12	6		15	6	156
3. <i>Physikalische Zeitschrift</i>	11	32				24	6	2	2	17	28	152
4. <i>Académie des Sciences, Comptes rendus</i>	9	32				2	3	2	1	10	4	86
5. <i>Hochfrequenztechnik und Elektroakustik</i>	6	40				4	2	1	1	10	3	77
6. <i>Archiv für Elektrotechnik</i>	3	17				36	3	3	1	10	4	42
7. <i>Naturwissenschaften</i>	16	4				4	1	1	1	10	1	41
8. <i>Zeitschrift für technische Physik</i>	2	9				5	2	3	2	10	1	26
9. <i>Elektrische Nachrichten Technik</i>	3	11				1	1	1	1	10	1	39
10. <i>Zeitschrift für physikalische Chemie</i>	9	15				1	1	1	1	10	1	39
11. <i>Koninklijke Akademie van Wetenschappen te Amsterdam, Proceedings</i>	22	3				4	13			11	11	26
12. <i>Elektrotechnik und Maschinenbau</i>		13										19
13. <i>Zeitschrift für anorganische und allgemeine Chemie</i>	22	4				1	1	1	1	10	1	26
14. <i>Journal de physique et le radium</i>	2	2				1	1	1	1	10	1	23
15. <i>Elektrotechnische Zeitschrift</i>	1	11				4	12	1	2	10	1	19
16. <i>Journal de chimie physique</i>	1	3				2	1	1	1	10	1	16
17. <i>Wissenschaftliche Veröffentlichungen aus dem Siemens Konzern</i>	1	2				5	1	1	1	10	1	14
18. <i>L'Onde électrique</i>	1	3				1	1	1	1	10	1	14
19. <i>Physica</i>	2	2				1	1	1	1	10	1	14
20. <i>Zeitschrift für Kristallographie</i>	1	2				2	1	1	1	10	1	12
21. <i>Helvetica physica acta</i>	1	2				1	1	1	1	10	1	10
22. <i>Revue générale de l'électricité</i>	1	2				1	1	1	1	10	1	10
23. <i>Telegraphen und Fernsprechtechnik</i>	10	9				5	5	1	1	10	1	9
24. <i>Zeitschrift für Elektrochemie und angewandte physikalische Chemie</i>												7
25. <i>Telefunkensetzung</i>												7
26. <i>Annales des postes, télégraphes et téléphones</i>												7
27. <i>Kolloid Zeitschrift</i>												7
28. <i>Kamerlingh Onnes Laboratorium der Rijks-Universiteit te Leiden, Communications</i>												7
29. <i>Zeitschrift für Instrumentenkunde</i>	3	1				1	1	1	1	10	1	7
30. <i>Acta physica</i>		2				1	1	1	1	10	1	5
31. <i>Stahl und Eisen</i>						4	4	1	1	10	1	4
32. <i>Zeitschrift für angewandte Mathematik und Mechanik</i>						1	1	1	1	10	1	3
33. <i>L'Elettrotecnica</i>						1	1	1	1	10	1	3
34. <i>Atti della Reale Accademia Nazionale dei Lincei</i>						1	1	1	1	10	1	2
35. <i>Zeitschrift des Vereines deutscher Ingenieure</i>						1	1	1	1	10	1	2
36. <i>Revue d'optique théorique et instrumentale</i>						1	1	1	1	10	1	1
37. <i>Deutsche Beleuchtungstechnische Gesellschaft</i>						1	1	1	1	10	1	1
38. <i>Archiv für Technisches Messen</i>						1	1	1	1	10	1	1
39. <i>Siemens Zeitschrift</i>						1	1	1	1	10	1	1
40. <i>Annales de chimie</i>						1	1	1	1	10	1	1
41. <i>Mathematische Annalen</i>						1	1	1	1	10	1	1
42. <i>Sitzungsberichte der Preussischen Akademie der Wissenschaften Mathematisch-naturwissenschaftliche Klasse</i>						1	1	1	1	10	1	1
43. <i>Elektrotechnikswissenschaften Mitterungen</i>						1	1	1	1	10	1	1
44. <i>Société Française Electriciens, Bulletin</i>	1	1				1	1	1	1	10	1	1

TABLE 3
TOTAL REFERENCES TO ENGLISH-LANGUAGE JOURNALS

Periodical	No. of Issues per Year	Proceedings of the Physical Society	London, Edinburgh and Dublin Philosophical Magazine and Journal of Science					Proceedings of the Institution of Electrical Engineers	Proceedings of the Royal Society of Edinburgh	Proceedings of the Royal Society of Edinburgh	General Electric review	British Technical Journal	Proceedings of the Franklin Institute	Journal of the Franklin Institute	General Electric review	British Technical Journal	Proceedings of the Institute of Radio Engineers	Proceedings of the Royal Society of Edinburgh	British Technical Journal	Proceedings of the Royal Society of Edinburgh	Total References to English Magazines	Total References to English Magazines	
			1.	2.	3.	4.	5.																
1. <i>Physical review</i>	24	48	124	32	1	1	62	124	13	35	23	(1,340)	819	1,270									
2. <i>Royal Society of London Proceedings</i> }.....	*	36	41	2	.....	1	12	13	.....	19	20	239	316	699									
3. <i>London, Edinburgh and Dublin Philosophical Magazine and Journal of Science</i>	12	64	(16)	18	.....	1	11	9	1	6	30	119	223	482									
4. <i>Nature</i>	52	12	40	8	.....	1	7	.....	5	30	82	159	344										
5. <i>Electrical engineering</i>	12	1	8	50	12	.....	(459)	11	54	34	4	.....	117	291									
6. <i>Journal of the American Chemical Society</i>	12	5	26	3	.....	2	30	.....	2	35	(180)	53	153	272									
7. <i>Proceedings of the Institute of Radio Engineers</i>	12	7	1	21	.....	6	30	4	2	35	8	61	175										
8. <i>Journal of the Institution of Electrical Engineers</i>	12	11	6	(148)	2	1	15	.....	2	14	3	67	121										
9. <i>General Electric review</i>	12	.....	5	1	1	51	3	(70)	.....	1	9	49	120										
10. <i>Electrical world</i>	24	.....	7	7	.....	28	2	9	.....	1	1	55	109										

* Published at irregular intervals.

TABLE 3—Continued

Periodical	No. of Issues per Year	Proceedings of the Physical Society	London, Edinburgh and Dublin Philosophical Magazine and Journal of Science	Journal of the Institution of Electrical Engineers	Electrical Engineers	Electrician	Electric Journal	General Electrical Review	Bell System Technical Journal	Proceedings of the Franklin Institute	Journal of the Franklin Institute	Electrical Engineers	General Electrical Review	Bell System Technical Journal	Proceedings of the Institution of Radio Engineers	Proceedings of the Institution of Radio Engineers	Physical Review	Foreign References to English Magazines	Total References to English Magazines
1. <i>Journal of the Franklin Institute</i>	12	1	6	4	3	.....	18	(47)	7	4	2	23	39	107					
12. <i>Proceedings of the National Academy of Sciences</i>	12	.....	2	.....	1	.....	3	2	.....	1	1	49	54	105					
13. <i>Transactions of the Optical Society</i>	12	9	8	.....	8	.....	4	7	4	3	1	33	41	102					
14. <i>Review of scientific instruments</i>	12	2	.....	2	.....	8	4	7	4	3	1	47	22	100					
15. <i>Bureau of Standards journal of research</i>	12	.....	2	3	.....	10	.....	1	31	4	42	93							
16. <i>Proceedings of the Physical Society</i>	6	(93)	5	12	.....	2	1	2	1	2	20	9	36	89					
17. <i>Astrophysical journal</i>	10	5	2	.....	1	8	10	2	1	2	1	34	19	85					
18. <i>Bell System technical journal</i>	4	1	1	14	1	.....	23	2	2	(59)	20	.....	16	80					
19. <i>Indian journal of physics</i>	*	2	4	.....	.....	.....	.....	.....	.....	.....	.....	10	47	63					
20. <i>Review of modern physics</i>	4	1	1	.....	.....	.....	.....	.....	.....	1	.....	57	3	63					
21. <i>Electrician</i>	52	.....	2	14	.....	2	5	.....	1	1	3	.....	35	62					
22. <i>Journal of the Acoustical Society of America</i>	4	9	.....	2	.....	10	.....	1	1	1	15	.....	22	60					
23. <i>Journal of chemical physics</i>	12	3	7	3	.....	1	3	14	1	.....	.....	17	8	57					
24. <i>Wireless engineer and experimental wireless</i>	12	1	.....	5	.....	2	5	4	2	5	3	5	5	57					
25. <i>Physics</i>	12	6	.....	10	1	.....	5	4	2	5	3	5	13	56					

TABLE 3—Continued

Periodical	No. of Issues per Year	Proceedings of the Physical Society	London, Edinburgh and Dublin Philosophical Magazine and Journals of Science		Proceedings of the Institution of Electrical Engineers	Electronics	Electrical engineering	General Electric review	Bell System technical journal	Proceedings of the Institute of Radio Engineers	Plygital review	Foreign References to English Magazines	Total References to English Magazines
			4	2									
26. <i>Proceedings of the Cambridge Philosophical Society</i>	12	7	9	4	4	5	20	2	2	24	6	...	51
27. <i>Electric journal</i>	12	8	16	...	4	...	...	2	7	2	3	...	14
28. <i>Transactions of the Faraday Society</i>	12	1	3	4	1	...	3	2	1	1	1	...	49
29. <i>Engineering</i>	52	1	1	1	1	...	2	5	2	5	1	...	49
30. <i>Journal of scientific instruments</i>	12	4	19	19	19	...	1	1	1	1	2	...	47
31. <i>Science</i>	4	2	12	12	12	...	1	4	8	8	6	...	35
32. <i>Post Office electrical engineers journal</i>	52	1	1	1	1	...	1	1	1	1	9	...	28
33. <i>Mechanical engineering</i>	12	4	1	1	1	...	3	1	1	1	1	...	22
34. <i>Electrical communication</i>	4	2	1	1	1	...	1	1	1	1	1	...	21
35. <i>Railway age</i>	52	1	1	1	1	...	3	1	1	1	1	...	18
36. <i>Proceedings of the American Academy of Arts and Sciences</i>	24	8	...	...	...	...	...	1	1	1	4	...	17
37. <i>Society of Motion Pictures Engineers journal</i>	12	...	...	...	...	...	2	2	2	2	4	...	9

TABLE 3—Continued

Periodical	No. of Issues per Year	Proceedings of the Physical Society	London, Edinburgh and Dublin Philological and Magazine and Journal of Science	Journal of the Institution of Electrical Engineers	Electrical journal	Electronics	No. of Issues per Year
18. <i>Electronics</i>	12	.....	.....	.....	.....	.....	12
19. <i>Radio engineering</i>	12	.....	.....	.....	.....	.....	12
20. <i>Electrical review</i>	52	.....	.....	.....	.....	.....	52
21. <i>Engineering news record</i>	52	.....	.....	.....	.....	.....	52
22. <i>Journal of the Institute of Electrical Engineers of Japan</i>	12	1	.....	.....	1	1	12
23. <i>Transactions of the American Electro-chemical Society</i>	2	.....	.....	.....	1	6	2
24. <i>Engineer</i>	52	1	4	2	1	1	52
25. <i>Wireless world</i>	52	.....	2	.....	.....	8	52
26. <i>Transactions of the Royal Society of Edinburgh</i>	52	.....	3	.....	.....	8	52
27. <i>Journal of the Chemical Society</i>	12	.....	3	.....	.....	3	12
28. <i>American journal of science</i>	12	1	2	.....	.....	1	12
29. <i>Bell Laboratories record</i>	12	.....	3	.....	.....	3	12
30. <i>American Mathematics Society transactions</i>	6	.....	.....	.....	.....	3	6

TABLE 3—Continued

Periodical	No. of Issues per Year	Proceedings of the Physical Society	London, Edinburgh and Dublin Philosophical Society magazine and journal of science	Journal of the Institution of Electrical Engineers	Electrical journal	Electronics	Electrical engineering	Journal of the French Institute General Electric review	Bulletin technical journal	Proceedings of the Institute of Radio Engi- neers	Physical review	Total References to English Magazines
51. American Railway Engineering Association bulletin	10	.....	.....	.....	.....	.....	.....	3	.....	.....	3	6
52. Transit journal	12	.....	.....	.....	.....	.....	.....	6	.....	.....	6	6
53. Edison Electric Institute publications .....	*	.....	.....	.....	.....	.....	.....	5	1	.....	.....	6
54. Radio world	52	.....	.....	.....	.....	.....	.....	5	1	.....	.....	6
55. American journal of roentgenology and radium therapy	12	.....	.....	2	.....	.....	.....	1	1	3	1	5
56. Transactions of the American Illuminating Engineering Society	9	.....	.....	.....	.....	.....	.....	4	1	1	1	5
57. Power	12	.....	.....	.....	.....	.....	.....	4	1	1	1	4
58. Instruments	12	.....	.....	4	.....	.....	.....	4	1	1	1	4
59. London Mathematical Society Journal	4	.....	.....	4	1	1	1	1	1	1	1	2
60. Power plant engineering	12	.....	.....	13*	12	12	12	13	12	12	12	12

TABLE 4
FOREIGN REFERENCES TO ENGLISH-LANGUAGE JOURNALS

Periodical	Academie der Sciences, Comptes rendus	Elektrotechnische Zeitschrift	Archiv für Elektrotechnik	Revue Générale de l'Electricité	Physikalische Zeitschrift	Zeitschrift für Physik	Hochfrequenztechnik und Elektrotechnik	Annalen der Physik	Zeitschrift des Vereins deutscher Ingenieure	Total Foreign References to English Magazines
1. <i>Physical review</i>	45	21	4	32	353	266	10	88	...	819
2. Royal Society of London Proceedings }.....	18	7	...	3	91	151	8	30	2	310
3. <i>London, Edinburgh and Dublin philosophical magazine and journal of science</i>	13	1	6	12	71	72	13	33	2	223
4. <i>Nature</i>	27	...	...	104	...	4	11	13	...	159
5. <i>Journal of the American Chemical Society</i>	61	1	...	...	63	26	...	2	...	153
6. <i>Electrical engineering</i>	2	74	15	19	2	2	2	1	...	117
7. <i>Journal of the Institution of Electrical Engineers</i>	12	26	4	17	1	1	8	...	...	67
8. <i>Proceedings of the Institute of Radio Engineers</i>	6	4	3	3	...	43	2	...	...	61
9. <i>Electrical world</i>	44	2	9	...	...	...	...	...	...	55
10. <i>Proceedings of the National Academy of Sciences</i>	10	...	...	2	19	20	...	3	...	54
11. <i>General Electric review</i>	1	40	...	5	2	...	...	1	...	49
12. <i>Indian journal of physics</i>	14	20	...	...	4	8	...	...	1	47
13. <i>Bureau of Standards journal of research</i>	4	4	...	9	...	4	7	14	...	42
14. <i>Transactions of the Optical Society</i>	5	...	...	2	11	9	...	14	...	41
15. <i>Journal of the Franklin Institute</i>	1	6	2	1	15	2	4	8	...	39
16. <i>Proceedings of the Physical Society</i>	4	1	2	3	4	12	6	3	1	36
17. <i>Electrician</i>	25	2	3	...	...	2	2	...	1	35
18. <i>Engineering</i>	15	...	...	...	...	...	...	...	15	30
19. <i>Review of scientific instruments</i>	1	4	...	11	3	2	...	1	...	22
20. <i>Journal of the Acoustical Society of America</i>	8	...	...	...	...	...	6	8	...	22
21. <i>Astrophysical journal</i>.....	...	...	...	...	1	8	10	...	...	19
22. <i>Bell System technical journal</i>	5	1	3	...	...	5	2	...	...	16
23. <i>Transactions of the Faraday Society</i>	2	...	...	...	5	9	...	...	...	16
24. <i>Electric journal</i>	8	2	4	...	...	...	...	...	...	14

TABLE 4—Continued

Periodical	Academie der Sciences, Comptes rendus	Elektrotechnische Zeitschrift	Archiv für Elektrotechnik	Revue Générale de l'Électricité	Physikalische Zeitschrift	Zeitschrift für Physik	Hochfrequenztechnik und Elektroakustik	Ausland der Physik	Zeitschrift der Verein deutscher Ingenieure	Total Foreign References to English Magazines
25. <i>Engineering news record</i>									14	14
26. <i>Physics</i>	6				4	2		1		13
27. <i>Railway age</i>	12								1	13
28. <i>Journal of the Chemical Society</i>	8			2						10
29. <i>Science</i>	3				3	3		1		10
30. <i>Society of Motion Pictures En- gineers journal</i>							9			9
31. <i>American Mathematics Society transactions</i>	8									8
32. <i>Journal of chemical physics</i>	2				1	3		2		8
33. <i>Mechanical engineering</i>		1	1						7	8
34. <i>Electrical review</i>	4		2				6			6
35. <i>Radio world</i>							6			6
36. <i>Journal of scientific instruments</i>	2		2		1					5
37. <i>American journal of science</i>	5						5			5
38. <i>Radio engineering</i>							5			5
39. <i>Wireless engineer and experi- mental wireless</i>							5			5
40. <i>Proceedings of the American Academy of Arts and Sciences</i>				3			1			4
41. <i>London Mathematical Society Journal</i> }.....	1		3							4
<i>Proceedings</i> }.....										
42. <i>American journal of roentgenol- ogy and radium therapy</i>	1						2		2	3
43. <i>Engineer</i>				1					2	3
44. <i>Journal of the Institute of Elec- trical Engineers of Japan</i>							3			3
45. <i>Post Office electrical engineers journal</i>	3									3
46. <i>Reviews of modern physics</i>	3									3
47. <i>Transactions of the American Electro-chemical Society</i>						2				2
48. <i>Bell Laboratories record</i>	2									2
49. <i>Electronics</i>							2			2
50. <i>Electrical communication</i>				1						1
51. <i>Wireless world</i>							1			1

It may be of interest to those preparing for graduate work or research to note the languages of importance to electrical engineers. The usual academic requirement of a reading knowledge of both German and French is amply justified, from inspection of Table 2.

Examination of the lists may be disappointing to the adherents of a particular journal. It should be repeated that these lists are submitted as suggestions only and are subject to the limitations previously discussed. The final choice of a particular magazine must be made after a detailed consideration of the particular needs of the individual or institution. Neglecting all other factors, the number of issues per year is an index of value; this information is included in Tables 1 and 3. It is interesting to note that comparable lists are practically independent of the source of references used. This may be interpreted to mean that a sufficient number of references have been tabulated to obtain approximately full coverage of the field investigated. It is hoped that this investigation, which presents a much larger tabulation than that previously published,³ may be of assistance to those interested in a comprehensive list of technical periodicals for electrical engineers.

THEORETICAL CONSIDERATIONS

A study of these tables and those previously published, including the very recent work of Ruth H. Hooker,⁴ indicates that a reference count for the fields of chemistry, mathematics, physics, radio, and electrical engineering follows a simple mathematical law. This fact is apparent from inspection of Figure 2, in which the number of references to a given periodical and the periodical's number (i.e., position in the table) has been plotted on log-log paper for the tables obtained in this investigation. Similar graphs were also obtained for the other reference counts. The first twenty or thirty points follow a straight line approximately. The deviation of the remaining is probably due to an insufficient number of references.

³ *Ibid.*

⁴ R. H. Hooker, "A study of scientific periodicals," *Review of scientific instruments*, VI (November, 1935), 333-38.

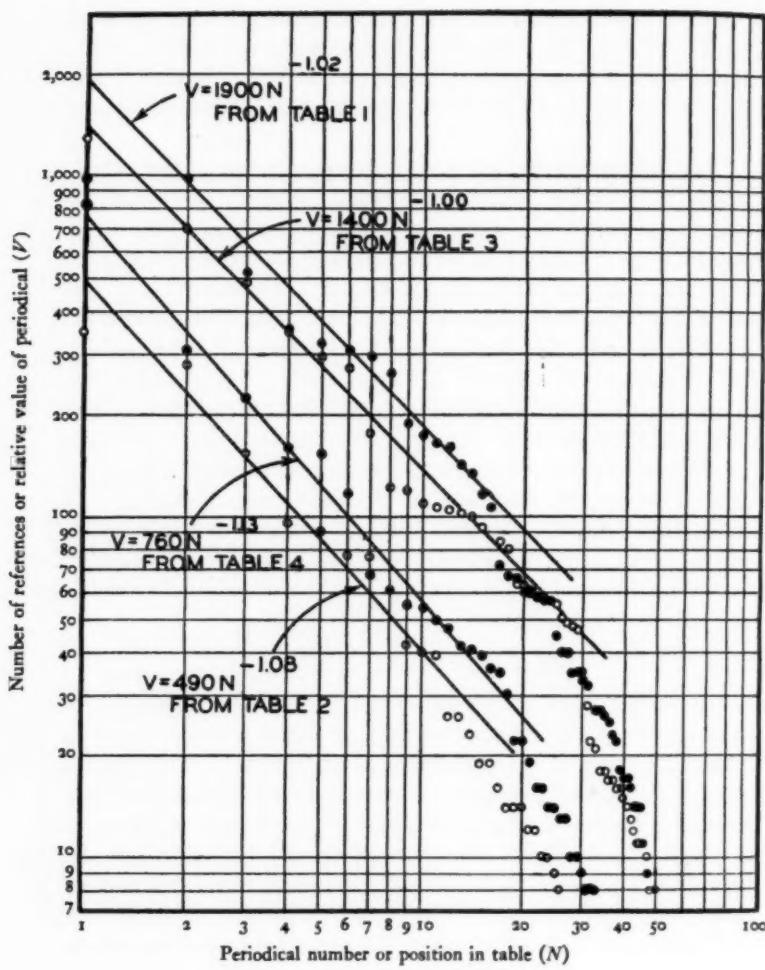


FIG. 2.—Reference count curves

It was found that a straight line was always obtained when the references to the same publication were not counted. In cases where the references to the same publication were included, the first few points were erratic; sometimes they were above and sometimes below the straight line determined from the majority of the points. A study of these reference counts, including those tables in which references to the same publication were not counted, and neglecting special abridged tables, indicated that the slopes of the lines were nearly the same and averaged about 1.05.

If it is assumed that the technical value of a periodical is given by its location in a reference count, all other factors being neglected for the present discussion, it would appear that the foregoing facts may be interpreted as follows:

The value of a periodical is given by an equation of the form

$$V = aN^n$$

where

V = Technical importance or value

N = Periodical number, or place in the reference count

The constants are determined from a graph of the reference count made on log-log paper. Constant (n) is the slope of the straight line drawn through the majority of the points, neglecting the points corresponding to periodicals at the bottom of the list. It is obvious that these latter points could not be expected to follow a definite curve. Constant (a) is numerically equal to V when N is taken as 1. The equation for the reference count is obtained by substitution of these constants in the power equation given above.

The number of periodicals required to furnish a library with a given percentage of the most valuable technical journals in a given field of science is given by the equation

$$N = \left[\frac{a}{V} \right]^{\frac{1}{n}}.$$

For example, suppose that one desires to determine the number of periodicals required to cover 98.5 per cent of the valuable technical articles in a given field. Then

$$N = \left[\frac{1}{1.00 - .985} \right]^{\frac{1}{1.05}} = 55 \text{ approximately,}$$

where n is given the average value equal to 1.05 found in this study.

The question of the number of references needed to secure reasonable results from a reference count in some other field may be answered in view of the foregoing discussion. References should be tabulated and plotted on log-log paper until the first twenty or thirty points determine a straight line. This indicates that a sufficient number have been obtained to follow the probability law controlling this type of investigation. (Obviously, the references should be taken to obtain diversity in the field under investigation.)

Although the conclusions presented above may appear unwarranted in view of the assumptions and limited data available, they were obtained from studies covering five different fields of science. Perhaps subsequent studies and the correlation of additional data will reveal the exact nature and reason for the apparent probability distribution of references found in this work. It is hoped that this analysis, tempered with a good measure of common sense, will be interesting as well as helpful to other investigators and will be of value to those interested in the general problem of evaluating periodicals in any scientific field.⁵

⁵ The author wishes to acknowledge the helpful suggestions of Messrs L. F. Fuller, H. L. Leupp, and P. Hurt, and also the various S.E.R.A., F.E.R.A., and N.Y.A. workers who compiled the reference lists.

A NONEXPANSIVE CLASSIFICATION SYSTEM: AN INTRODUCTION TO PERIOD CLASSIFICATION

JOHN J. LUND AND MORTIMER TAUBE

AT THE present time many librarians are admittedly confronted with the alternative of retaining an obsolete and unsatisfactory classification system or of having their libraries undergo the confusion and expense of changing the system. Either alternative may, in many cases, be practically impossible. Moreover, a new classification system based on the principles of systems now in use will in time, if not at once, bring with it the recurrence of the same problem. Behind this unfortunate situation, and the cause of it, is the great inherent defect of present classification systems, namely, their explicitly stated or implied claim to permanence. This claim is a product of the general intellectual temper of the age in which the Dewey, Cutter, Brown, and Library of Congress systems were devised. The nineteenth century was an age of "progress"; it was an age firm in its assurance that it had seized upon ultimate truth (a few details might still be lacking, of course); it was an age that overlooked the conditions of its birth, that envisioned the gradual perfection of the truth and values it already possessed and never dreamed that its vaunted progress had its goal and logical culmination in the barbarism of the World War. Thus, knowledge was supposed to have reached a stage where a comprehensive and fairly definite classification could be made to include it all under a definite number of main headings, the necessary additions to be provided by the expansions of subheadings. Older classification systems were regarded as merely imperfect attempts to attain what was now very near at hand.

The absurdity of providing for all future knowledge by subdivisions or expansions of present systems is becoming increas-

ingly evident. Likewise the folly of treating past classification systems, which were perhaps quite adequate at the period when they were made, as mere primitive ventures or historical curiosities must be apparent. The most that any system can hope to do is to classify accurately and completely knowledge at any given stage of its development. And the better it does this, the shorter will be its life.

The importance of realizing the seriousness of this situation cannot be overemphasized. Classification is admittedly one of the foundation stones of librarianship. Unless this portion of the foundation can be kept firm, libraries will be forced to return to the method of shelving books by their accession numbers, leaving all classification to the catalog. In the hope of preventing this, and as an attempt to restore classification to its proper place in library science, we present this paper. In its successive sections the implications of the general considerations advanced in this introduction for the specific task of classifying books in a library will be made increasingly clear. Certain criticisms of existing systems will be presented which we regard as definitive. In no case do we resort to the fruitless procedure of criticizing details *qua* details. If examples are given, it is for the purpose of illustrating a question of principle. One word more—in the criticisms and suggestions to follow, we are concerned primarily with the task of classifying books in a scholars' or research library.

I

The following principles are usually stated in one form or another in manuals of classification:

Principle 1.—A system of classification should not only collect like things and separate unlike things but should show the proper relationship both of co-ordination and of subordination between classes.

Principle 2.—A system of classification must be comprehensive, embracing all past, present, and future knowledge.

Principle 3.—The characteristics chosen as the basis of classification must be essential to the purposes of the classification.

Principle 4.—The terms used must be used with a consistent meaning throughout.

Principle 5.—The notation must be made to fit the classification, rather than the reverse.

Principle 6.—The notation must be economical.

Let us inquire how these principles are carried out or exemplified in existing systems.

Principle 1. Collection of like things and separation of unlike with indication of relationship.—While all existing systems provide for expansion and for the addition of subclasses, they do not and cannot provide for changes in the relationships of classes and subclasses. Once a class is assigned, it must remain fixed in relation to all other assigned classes, and no amount of subdividing can alter the relationship. Consider the following examples: (1) During the Middle Ages theology was not only a science but the first science. It supplied the principles from which all other sciences were derived. In order to show this relationship, a classification system would have to subordinate science to theology. In no present system is this done. (2) During the period of Babylonian civilization astrology was a main class or intellectual pursuit, under which there would be subordinated divination and astronomy (i.e., the empirical study of the heavenly bodies). In present systems astrology is classed with medieval astronomy,¹ or under the subheading "Occult sciences" under the main heading "Philosophy."²

If it is argued that at the time the present systems were constructed the "true" relationship of theology and science and astrology and astronomy was known, the following example will illustrate the truism that knowledge had not achieved a fixed and final pattern at that time. Dewey, much to the horror and resentment of present-day psychologists, subordinated psychology to philosophy. In his time such a subordination might have been appropriate. No amount of subdivision, however, can change this relationship which is universally recognized as erroneous. Nor can we doubt that such changes will continue to occur as will make relationships which we now accept without question obsolete. Prophecies on this point, especially when

¹ See Library of Congress schedule for astronomy.

² See Decimal Classification schedule for philosophy.

they are specific, are dangerous. That is to say, we may know that changes will occur without being able to foretell specific changes. With this reservation in mind the following example may serve to illustrate the inevitable breakdown of existing relations. Mr. Berwick Sayers expresses doubt as to the propriety of regarding "history" as a subject division: "History, for example, may be a subject, or it may be a form."³ He does not completely resolve this doubt in favor of either alternative, but he inclines toward accepting the latter: "History may be said to be always *a form of treatment*—a history of England being merely England treated in the form or from the standpoint of history."⁴ Were Mr. Sayers' position, as expressed in this last quotation, adopted—and it is the position most nearly in accord with the "new history"⁵—all existing classification systems would have to be drastically changed. Even if this extreme position is not generally accepted, the doctrine that political history is subordinate to economic history is now part of the official creed of 160,000,000 people. Hence, it is evident that changes in relationships will continue to occur and that existing systems cannot satisfy the first principle.

Principle 2. Comprehensiveness.—Most existing systems can satisfy Principle 2 if this principle is taken in isolation; but they cannot satisfy Principle 2 in conjunction with any of the others. In other words, the possible combinations of numbers or letters is infinite, and any book or class of books can be assigned a number or series of letters. Hence the claim of indefinite expansion, taken in isolation, really claims nothing. It has already been shown that no existing system can achieve Principles 1 and 2 together. In the consideration of the remaining principles we will show that Principle 2 cannot be achieved in conjunction with them.

³ W. C. Berwick Sayers, *A manual of classification* (London: Grafton & Co., 1926), p. 82.

⁴ *Ibid.*, p. 82 n.; italics Sayers'.

⁵ There is an ever growing tendency on the part of historians to regard *everything* as the subject matter of history. Contrast this view with history conceived as an account of dynasties and wars.

Principle 3. Essentiality of characteristics of classification.—Since purposes vary, a characteristic essential to the purposes of a classification must vary. However, Mr. Sayers, who enunciates this principle,⁶ believes that the characteristic essential to the purposes of the largest number of scholars and readers is a "natural" characteristic, as opposed to an "artificial" characteristic. The terms "natural" and "artificial" are difficult to define. So far as we are aware, no philosopher has ever succeeded in defining them to the satisfaction of even a majority of other philosophers. Mr. Sayers holds that the division of books by subjects is the most "natural"; but since the subject of the book depends on highly artificial man-made conventions, such as grammar, language, ideas, symbols, etc., we believe that a book has other characteristics to which the term "natural" is more applicable. For example, the date of publication is an event in physical nature; and if books were classified chronologically, it could be significantly held that they were arranged in a "natural" classification. Indeed, if it is presumed that the subject of a book transcends time and temporal change, it would be in accord with accepted usage to refer to the subject as a nonnatural characteristic of a book. In any case, Mr. Sayers does not establish the thesis that subject classification best serves the purposes of users of a library; he states it as a dogma. Since, as yet, we have not proposed any alternative to subject classification, we can only say at this point that we believe that this dogma is false. The reasons for this belief will be adduced below.

Principle 4. Consistency in meaning of terms.—It may be possible to use terms with a consistent meaning throughout the system if by "throughout" is meant the structural, exclusive of the chronological, aspect of the system. That is to say, at any one time the meanings of the terms can be fixed; but the meanings of terms change with time so that any system in use is faced with the necessity of using terms whose meanings are subject to change. Consider, for example, a term often used by writers on classification, the term "philosophy." The great book in which Newton enunciated the principles of gravity is called

⁶ Sayers, *op. cit.*, p. 42.

Mathematical principles of philosophy; yet today this book is classed with works on physical science. Consider another example: Today works by Irish authors are grouped with English authors; but the rise of Irish nationalism may mean that in the future the term "English literature" will have a narrower application. The impossibility for any existing system to realize or exemplify Principles 2 and 4 is evident in the statement of the principles. To deny this is to assert that terms can be adduced which have had constant meanings and which will remain constant throughout all future time. We know of no such terms, and it would seem that the burden of proof falls to anyone making such an assertion.

Principle 5. Ancillary role of notation.—Most present-day systems do exemplify this principle to a degree, but not completely. Any "expansive" system which employs a notation must fit new subclasses to the notation it employs. However, the only system which seems to us to err in principle rather than in degree is the Dewey Classification. Mr. Dewey was apparently smitten with the expansive properties of decimals. His classification is designed to fit the notational system with a disturbing disregard for actual relationships of co-ordinate classes and a strong faith in the magic properties of the number 10. Indeed, Mr. Dewey shows himself a disciple of Pythagoras. No elaborate proof is needed for these contentions. The skeptic need only be referred to the alarming frequency of ".9 other authors, languages, countries, philosophers, religions, etc." Again it should be clear that the degree in which existing systems can satisfy Principle 2 must vary inversely as the degree in which they can satisfy Principle 5. A system to include all future time must add classes; and if it has a notation, it must so design these classes as to fit the possibilities of its notation.

Principle 6. Economy of notation.—Unequal expansion, which is unavoidable, will lead to an uneconomical notation in some sections of a classification system. The necessity for an indefinite expansion requires an elaborate system of notation. This must be understood in conjunction with Principle 2. Since that principle holds that a system must provide for all future knowledge,

it follows that the notation must at some time, sooner or later, become awkward and cumbersome. This must be the case for all existing systems. There is also the further difficulty that certain classes become more or less obsolete, and, as a result, sections of the notation become frozen. The number of books to be classified may remain the same or increase, but they must be compressed in fewer classes and only part of the notation is available. Most systems use notations that "take into consideration only accumulation and growth. The weeding-out of dead or dying fields makes dead space in such classification schemes; the revaluation and transposition of existing fields is impossible."⁷ For example, one-tenth of the Dewey notation is devoted to books on religion. Regardless of the paucity of new books on religion, one-tenth of the number system must still be used for them and cannot be used to alleviate the burden on other portions of the notation.

II

The discrepancies which have been found between principles and existing systems do not seem to deter proponents of these principles from accepting existing classification schemes.⁸ Critics of existing systems have long emphasized many of the difficulties pointed out above.⁹ But in general there is a failure to perceive that no revisions of these systems or similar systems can ever serve, except temporarily, to obviate these difficulties. This temporary respite, which is all any revision can offer, may, in large libraries, lead to constant reclassification. Thus Mr. Arundell Esdaile, in explaining the reluctance of large libraries to adopt subject classification, holds that

their case is strengthened when it is realized that the rearrangement would have to be repeated at intervals of at least half a century, which in the life of a

⁷ Georg Schneider, *Theory and history of bibliography*, translated by Ralph Robert Shaw (New York: Columbia University Press, 1934), p. 195.

⁸ Sayers enunciates these principles and also advocates the use of the Decimal System, which cannot hope to satisfy them. Dewey himself states similar principles in his Introduction. Cf. Margaret M. Herdman, *Classification, an introductory manual* (Chicago: American Library Association, 1934).

⁹ Cf. E. B. Schofield, "The future of 'Dewey,'" *Library Association record*, Ser. 3 (1933), p. 245.

library represents indecent frequency. Yet such is the truth. The divisions of science are as impermanent as the shapes in a kaleidoscope.¹⁰

We have given some intimation of the reasons that led system-builders to enunciate principles which their systems cannot hope to satisfy. The nineteenth century had an abiding faith in the permanence of its values and the ultimate validity of its scientific structures. This is illustrated by the belief of systematizers that, once a good classification of knowledge was achieved, it would be permanent. They did not learn from the fate of previous systems that their own must of necessity become obsolete.

Decimal classification was born in a period when mankind had full confidence in the all-mightiness of materialistic wisdom. The middle of the nineteenth century was the culmination point of scientific positivism. It seemed that the totality of available knowledge as well of future knowledge could be arranged in a simple predetermined plan. Forgotten was the word of wisdom that Hamlet to Horatio spoke.¹¹

Of course, there were individuals living in that period who possessed a firm realization of the effects of time and temporal process, but in general the temper of the age was that which we have attempted to describe and which is so well set forth by Dr. Donker Duyvis in the foregoing passage. Among these individuals was one who was given no honor in his own day and is only lately being recognized as one of the most comprehensive geniuses America has ever produced. We refer to Charles Sanders Peirce, who held the following view of classification:

Many have been the attempts at a general classification of the sciences. Dr. Richardson's little book upon the subject¹² is quite incomplete, only enumerating one hundred and forty-six systems. They are naturally many, because not only are their purposes various, but their conceptions of a science are divergent and their notions of what classification is are still more so. Many of these schemes introduce sciences which nobody ever heard of; so that they seem to aim at classifying not actually existent sciences, but possible sciences. *A somewhat presumptuous undertaking is that of classifying the*

¹⁰ See "Notes and news," *Library Association record*, Ser. 3 (1933), pp. 242-43.

¹¹ Dr. Donker Duyvis, in an address given before the British Society of Bibliography. Reported in "Notes and news," *ibid.*, p. 243.

¹² Ernest Cushing Richardson, *Classification, theoretical and practical* (New York: Charles Scribner's Sons, 1901).

science of the remote future. On the other hand, if classifications are to be restricted to sciences actually existing at the time classifications are made, the classifications certainly ought to differ from age to age. If Plato's classification was satisfactory in his day, it cannot be good today; and if it be good now, the inference will be that it was bad when he proposed it.¹³

The essence of the difficulty with present systems lies in the attempt to state, once and for all, the main headings for the classification of knowledge as exemplified in the books of the past, present, and infinite future. Obviously, the whole body of knowledge, past, present, and future, does not present a unified picture or the material for any single scheme. On the other hand, it is undoubtedly true that in any particular age a structure of knowledge and intellectual pursuits can be discerned and classified. And if the classifier has the books which represent the intellectual achievement of any age as present material for a classification, an orderly, systematic, true, and final classification is possible. Indeed, it is one of the boasts of the Library of Congress Classification that it was made from the books. Classification of the productions of any age or period is not only possible but feasible for reasons to be made clear below. Hence the following scheme, which we have called "Period Classification," is suggested for use in libraries.

III

It is proposed that chronological division precede subject division; by this is meant division of books into the periods in which they were written and classifying by subject within each

¹³ *Collected papers of Charles Sanders Peirce*, edited by Charles Hartshorne and Paul Weiss, I (Cambridge: Harvard University Press), 83.

In order to avoid digressions we have not discussed the relation of classification of knowledge to classification of books. The following passage sums up the essentials of the position we assume: "The distinction so often drawn between the classification of knowledge and the classification of books should not lead us to negative conclusions. . . . There are indeed two kinds of classification, on the one hand the logical, natural, and scientific, on the other hand the practical, the arbitrary, the purposive; but for library classification we should join these two hands; the two purposes should be combined. To make classification conform to the scientific and educational organization of knowledge is to make it the more practical. . . . It were well too that we should bear in mind that a library is, in a higher view, a temple of knowledge, and its classification should be, not a haphazard, ramshackle structure, but an internal edifice worthy of its environment and itself of intellectual and educational value" (Henry Evelyn Bliss, *The organization of knowledge in libraries* [New York: H. W. Wilson, 1933], pp. 36-37).

period. Each period is to be a definite cultural epoch; that is to say, a period is to be a span of years within which knowledge presents a unified structure which can be expressed in a system of classes and subclasses. When such a system of classes requires extensive structural revision, namely, when the established system is no longer adequate for the classification of knowledge in books, a new period is inaugurated and with it a new system of classes and subclasses. The following is a tentative list of periods:

- I. Early civilizations of the Near East
- II. Hellenic
- III. Hellenistic and Roman
- IV. Medieval (including Arabic) to the thirteenth century
- V. Age of transition, Renaissance (fourteenth, fifteenth, and sixteenth centuries)
- VI. The seventeenth century
- VII. The age of physical science (Newton to Darwin)
- VIII. The age of "progress" (Darwin to the World War)
- IX. From the World War

Within each of these periods a permanent classification is possible; and it is evident, or should be, that no classification made for one period would fit any other period, much less the periods which are to come. The principle in terms of which classes are defined has been stated. In characterizing each period and in the following lists of suggestions for classes within each period, the operation of the principle is illustrated.

I. For the civilizations of the Near East, the headings or main classes "Philosophy," "Mathematics," and "Drama," necessary in subsequent periods, are not required. The following main classes might be satisfactory:

Magic and ritual
Practical arts
Astrology
Astronomy
Divination
Medicine
Measurement
Grammar
Chronicles
Legal codes

II. In the Hellenic period philosophy, mathematics, and drama assume positions of importance. Not only are changes in main headings required, as contrasted with the first period, but mathematics, which is a subclass in one period, subordinated to the practical arts, becomes in Period II a dominant intellectual pursuit. For this period, Aristotle's classification might be used either as he gives it or in a modified form. Aristotle's classification:

Theoretical philosophy
Physics
Metaphysics
Mathematics
Practical philosophy
Ethics
Economics
Politics
Productive philosophy
Poetics
Rhetoric
Arts

III. During the Hellenistic and Roman period speculative philosophy ceases to be a dominating intellectual pursuit, and jurisprudence or Roman law becomes a main class. It is the age of the development of special sciences and pedagogy. The period also witnesses the beginnings of dogmatic theology. Undoubtedly the classification system of the library at Alexandria would have fitted the needs of this period did we possess an account of that system. Lacking such an account, the following heads might serve:

Law	Ethics
Theology	Politics
Special sciences	Poetics
Pedagogy	Rhetoric
Metaphysics	Arts

IV. The medieval period is characterized by the growth of two world-religions and by the subordination of all secular interests to the religious interest. Probably with the addition of the general headings "Theology" and "Philosophy" for theological and philosophical interests which fall outside "Eth-

ics" and "Physics," Roger Bacon's classification could effectively systematize this period. Roger Bacon's classification:

Philology	Medicine
Mathematics	Experimental science
Physics	Ethics
Optics	Relations to God
Astronomy	Civic morality
Barology	Personal morality
Alchemy	Christianity
Agriculture	

V. This age—the age of transition and Renaissance—is characterized by the re-emphasis on secular pursuits and the relations of man to nature. The rise of nationalism, and with it the rise of national literatures, would have to be provided for in classification systems. Also, a main heading for classical studies might be required. We shall dispense with listing any scheme for this period and the ones which follow. Our present interest is not in any scheme *per se* but in the differences illustrated.

VI. The seventeenth century is the age of systematic philosophy and physics. It witnesses the development of mathematical method in physical investigation from Galileo to Newton.

VII. The evolution of the special physical sciences and the development of association psychology must be exhibited here; also the beginnings of the Industrial Revolution with the resultant change in social life and the attendant changes in literary activity.

VIII. This period witnesses the establishment of the biological sciences as a main division of human enterprise; also the rise of modern capitalism and imperialism.

IX. The World War and the question of conflicting economies define this class so far as can be decided at present. At least it must be distinguished from the previous age. What changes will determine the end of this period cannot be decided now.

Obviously, these brief statements do not exhaustively describe the differences in intellectual accomplishments and pur-

suits of these periods. They are offered merely as illustrations of the kind of considerations that period classification would entail. An examination of the lists given and of other lists to be found in any manual of classification will disclose that classifications suggested in previous periods by men of these periods are not to be treated as historical curiosities¹⁴ but as more or less successful attempts to classify the existing knowledge at the time of their construction. It should be noticed that the same main headings used in different periods do not always mean the same thing. Evidence of different meanings is to be found in the different subdivisions of these headings. Compare, for example, the subdivisions of "Philosophy" according to Aristotle and Francis Bacon. Finally, it must be remembered that in the development of schedules for each period, as well as in the determination of the number and extent of the periods themselves, the aid of scholars and specialists will be required.

IV

Having indicated in outline the proposed system, we can now proceed to determine whether or not this system exemplifies or can exemplify the principles of classification stated above.

Principle 1.—It is evident that the relationships of subjects within any period can be accurately shown. The relationship of classes in one period to classes in another can be indicated by similarity or differences in terms and similarity and differences in subdividing classes. Further, the chronological relationship is made definite (see below under Principle 3). The necessary separation of material on similar subjects into periods is, we feel, compensated for by the more exact groupings within each period. We realize that the weight of present tradition will suggest this latter point as an obvious criticism of the proposed system. Hence this criticism shall be treated under a separate heading.

Principle 2.—Again we may say that there can be no doubt

¹⁴ Cf. James Duff Brown, *Library classification and cataloguing* (London: Libraco, Ltd., 1912), p. 7. "There were numerous scholastic knowledge-classifications produced during the next nine hundred years, but they are interesting mainly as curiosities."

as to the possibility of completely realizing this desideratum of comprehensiveness. What is more important, this principle can be exemplified without distorting the relationships between classes and without necessitating an awkward unbalanced notation.

Principle 3.—We feel that for the purposes of a scholarly reference library a chronological classification is just as essential as a pure subject classification. A scholar would know immediately where source material was to be found and would not have to delve through volumes of secondary material. Secondly, any scholar knows the period, if not the exact date, of important critical works. Thirdly, the period in which a book falls is important in determining the value of the book to the user. Fourthly, the view of the shelves can be synoptic, giving a complete picture of the intellectual productivity of the period.

Principle 4.—The proposed system approaches the exemplification of this principle of consistency in meaning of terms to a greater degree than any other system. The variation in the meaning of a term within any period will never be sufficient to cause confusion. This cannot be said for any system which attempts to make terms carry one fixed meaning throughout all time.

Principle 5.—Since the first step in constructing the proposed system must be the making of schedules for the different periods, the requirement of each schedule can be determined before a notation is attempted. Thus there is little danger that the notation will dictate the schedule.

Principle 6.—Many factors contribute to making possible a simple notational system for the proposed scheme. In the first place, the schedules will be complete and the notation will not be required to provide for possible expansion. Secondly, the equal development of schedules will permit the equal distribution of notation throughout the scheme. Thirdly, no portions of the notation will be lost through the accumulation of dead material and the freezing of classes.

V

By this time it will be recognized that we are not proposing or advocating a pure chronological classification. The main principle upon which the scheme is based is that subject classification is feasible only within periods. The major departure from usual library practice which the system involves is the separation of books on "like" or the "same" subjects. We will first consider this question in general and then proceed to consider particular points which it involves.

It is admitted by the stoutest exponents of subject classification that not *all* the material which a library possesses on any one subject can be classed together. For example, Mr. Cutter holds that "all-collecting classification, 'is impossible except with exceptions,'"¹⁵ and that to hold fast to the *all* is a mark of naïveté. "Possibly some novices and hasty readers have been deceived by this unlimited claim, and have overestimated his [Dewey's] system in consequence. He should have said, 'All that it is on the whole desirable to get together.'"¹⁶ Mr. Berwick Sayers, in pointing out that Dewey's system does not group *all* the books on one subject in one place, adduces a principle which resembles the one advanced by Mr. Cutter. "The decimal system is by no means a one-place system. There are numerous . . . separations in Dewey, all of which can be defended by another fundamental rule of classification: that of essential place—a work must go where it is most useful."¹⁷ It is obvious that the propinquity or separation of books on the "same" subject is not a matter of principle in the subject classifications. Rather, the ultimate decision is made in terms of practical considerations. That is to say, we are not told to put all the books on the same subject together, but only those which are most useful or most desirable together. This dictum does not solve any questions; it merely presents them. What is

¹⁵ Charles Ammi Cutter, *Close classification*, reprinted in *The library and its contents* (New York: H. W. Wilson, 1925), p. 206.

¹⁶ *Ibid.*, p. 205.

¹⁷ Sayers, *op. cit.*, pp. 190-91.

the most desirable or useful? Whose desire or use is to be considered? Since, however, access to the shelves is usually limited to scholars, the question is reduced to a choice between one general subject classification and period classification with subject divisions as fulfilling their needs. Some of the reasons for considering period classification to be the most useful have been enumerated (see p. 386, under "Principles"). A consideration of the following points substantiates this conclusion.

One of the most important and interesting experiments in educational practice and procedure attempted by American universities was the Experimental College at the University of Wisconsin headed by Dr. Alexander Meiklejohn. The purposes and accomplishments of the experimental college have been admirably stated by Dr. Meiklejohn himself.¹⁸ The relationship of this experiment to the period classification is evidenced in the curriculum which Dr. Meiklejohn and his associates adopted. It is called the "Athens-America curriculum." As its name suggests, the curriculum was designed to present to students not isolated topics but a general study of civilizations, with all that this concept involves. A whole year is spent in the study of the Athenian civilization, its art, philosophy, science, politics, etc. Another year attempted to cover similar topics for the contemporary American scene. We are sure that Dr. Meiklejohn would have found the period classification an invaluable adjunct to the work of the college.

This may be the outstanding example but not the only evidence of the rise in importance of the concept "civilization." More and more it is realized that specialization must be supplemented by a knowledge of conditions and origins. No subject can really be understood unless it be seen against the background of competing interests and pursuits which formed the intellectual temper of the age or period which created it.

The period classification would involve the separation in many cases of secondary from source material. That is to say, the history of a period might be separated from books written in that period. A scholar who wished to compare, at any one

¹⁸ *The experimental college* (New York and London: Harper & Bros., 1932).

time, source and secondary material might find this separation inconvenient; but another scholar concerned either with the sources or with what had been done on a certain subject might find the separation convenient. The purposes of scholars are various, and there is no classification system which can make recourse to the catalog unnecessary. But it must not be thought that the period classification differs from a subject classification in separating related books. Rather, a different principle of relationship is emphasized, and many books are brought together which the subject classification would separate.

The question of the classification of editions presents a problem which may call for various solutions, depending upon the resources of individual libraries. For example, if a library is already in possession of a good Greek text of Plato's dialogues, a newly issued edition or translation would be classed in the period of its issue. The fact that editions of Plato are issued in any period is an important fact concerning the intellectual productions of that period. On the other hand, a library may decide to keep all editions of a similar work together (in the period when it was written) regardless of the dates of the editions. However, in cases where interpretations or critical materials are included with the text, we feel that the purposes of the period classification will best be served if the book is classed in the period in which it is issued.

A word might be added at this point as to the nature of the classification advocated for contemporary use. Undoubtedly it would more nearly resemble the classifications in use than would the systems of the earlier periods. However, it would certainly be much simpler. The various pure subject classifications must provide for a manifold of relationships which have ceased to exist and for subdivisions which are not now the topics of literary enterprise. Nor would it be necessary to attempt the impossible task of providing a place for everything that will ever be written. This does not mean that classification systems are to be changed every year. An age has its period of incubation, growth, and decay. Within any age certain intellectual currents are dominant. When new intellectual currents become

dominant and replace the old, then is the time for a new system. At that time as much of the old as is still serviceable can be incorporated into the new.

The classification of reference material presents no additional problems to the period classification. Reference materials in use in a general reference room will usually fall within the last period. Older reference materials will be classed with the period in which they were the most useful, i.e., the period in which they were written. General periodicals will be kept, as is customary, in a general periodical stack. Period classification of periodicals is unnecessary since the periodicals in themselves exhibit chronological order. However, if it is desirable to show what periodicals were being published in certain periods, this can be done. Periodicals on special subjects will be classed with the subject in the period in which they appeared. The separation of volumes of the same periodical will work no hardship on a person with a definite reference, and it will aid searchers after material on specific subjects. Periodical material is usually of current interest, and period classification will keep the material "where it is most useful."

Finally, we do not propose the discarding of proved features of existing systems, as, for example, form divisions, division by country, mnemonic features, etc. These will find their proper place in the working-out of the schedules for each period. Further, the period classification will permit variation in form divisions for different periods if necessary. In the matter of geographical divisions, new countries could be recognized and confusions of reference could be avoided. For example, the U.S.S.R. includes Russia and is by no means identical with it, as most present systems assume.

VI

In the introduction to this paper we referred to a problem which "sooner to some, later to many, but finally to all" librarians must come as a crucial question. Shall an obsolete, awkward, unbalanced classification be retained, or shall the library undergo the confusion and expense of reclassifying

books? We believe that the proposed system represents a solution of this dilemma. The dilemma may be stated in this way: either libraries must give up subject classification altogether and go back to arrangement by accession numbers or sheer chronology or the library must be prepared to change its complete classification system at stated intervals. It can be seen that the proposed system is an attempt, through compromise, to avoid either horn of the dilemma. Subject classification is preserved, and the need for reclassification is eliminated.

Outside of this general consideration, there are several respects of varying importance in which the period classification can contribute to economical and efficient library service. In the first place, the relative permanence of the shelving, especially in the older sections, reduces cost of library operation. We have been unable to procure statistical information relative to the chronological distribution of accessions. However, we have been able to determine—and on this point there will be little disagreement except in cases of special collections or libraries—that the overwhelming majority of accessions fall into the last period. Consider, for example, the large percentage of the budget which is allocated to the purchase of periodicals and new reference material. And in universities where departments suggest most of the items to be secured, these titles are usually culled from announcements of new publications.

For circulation service the modern period can be shelved closest to the circulation desk. In most university libraries this would be the central floors of the stacks. This section of the stacks should provide room for a large number of accessions. As has been stated, the notation used would be much simpler, especially in the early sections, although the difference in simplicity would not be negligible even for the modern period.

Librarians often wish to have information as to the resources and makeup of their libraries. It is admitted by exponents of pure subject classification that, if a librarian wishes to know what material a library possesses on a certain subject, a glance at the shelves is not sufficient. He must consult the catalog as well as periodical guides. This can be done equally well if the

books are shelved according to the period classification. But suppose the librarian wishes to determine how many books or what kind of books the library has which were written or appeared in certain periods. There is no way in which the catalog can supply this information. Hence the period classification is a genuine supplement to the catalog and does not do over again inefficiently what the catalog does efficiently.

VII

The question is often asked: What has been done in certain fields or on certain subjects? Librarians have felt that a pure subject classification supplies the answer to this question. The scholar raising it need only go to the shelves, he is told, and there he may discover what has been done. But the question is ambiguous, and the sense in which a pure subject classification can answer it is the sense which would satisfy only a pedant. That is to say, a genuine scholar is not interested in lists of titles; he does not wish to know how many books have been written on a certain subject. Rather, he is interested in ideas. For him a satisfactory answer to this question will be presented in terms of the modification of ideas, the development of concepts, and the shifting relationships of intellectual interests and pursuits. And the attempt to answer this question in this manner is one of the chief concerns of period classification. Not only will the arrangement of books on the shelves have an intellectual significance whose mastery should be the aim of every scholar, but the schedules themselves will have a genuine functional relationship to scholarship. Today, how many scholars, exclusive of librarians, know anything, or would care to know anything, about library classification systems? To be sure, their investigations will disclose that certain books are grouped together and certain books are separated. But such a disclosure could never excite any desire to study the principle of classification. Librarians must face this fact. The enterprise which, as much as any other, establishes librarianship as a distinct profession meets with little or no consideration from the general world of scholarship. The schedules of a period classification

would represent genuine contributions to knowledge. They would invite study not only as a technique for the mastering of the arrangement or shelving of books but for their own sake. In them one could trace the evolution of sciences, the development and decay of cultures, the influence of the past on the present, and the modifications or new departures of the present. The growth of astronomy from astrology, the growth of chemistry from alchemy, the splitting-off of sciences from philosophy, the rise of nationalities and nationalism, the effect of war on the lives of men—all of this and more could be traced in the schedules.

Of course, no librarian or scholar could hope to master the schedules of a period classification in all their details. Nor could the development of the schedules be other than a result of co-operative activity on the part of scholars. But the creation and use of a period classification would establish a community of interests between librarians and scholars. Any librarian could study the schedules of his library not only to gain knowledge for himself but in order to be able to impart such knowledge to his colleagues in the more specialized fields of scholarship.

In the beginning of a science the first requisite is classification. And, invariably, the earliest classifications are static. This was true in biology as it is today true in library practice. But as a science develops, the interest in static classification diminishes and the evolution and development of forms and classes is recognized. This evolution of forms may be rapid or slow, and its speed undoubtedly varies on different levels. But on no level is it wholly absent, and in the realm of ideas as expressed in literature it is rapid.

The librarian, then, must become not only the custodian of books but also a student of the development of knowledge. The system of knowledge, as expressed in books, will be his field of investigation; and the arrangement of the books, plus the schedules, will be the material aids of such an investigation. Only if this is the case can the library attain maximum functional activity in academic life. The library will not only be a storehouse of materials; it will become an effective instrument

for co-ordinating scholarly activities. In it the student may learn the relation of his own activities to the activities going on about him. He may discover that a competing interest had common parents with his own, and this may teach tolerance and broaden vision.

In some universities today the librarian or some member of the library staff offers a nonprofessional course to the general student body on the use of the library. This course, of necessity under present conditions, must confine itself to a discussion of techniques and guides. Nor is the importance of such instruction to be minimized. But were a period classification in use, the librarian could supplement his discussion of the method of finding books with an account of the classification scheme. And this account would have intellectual content that no amount of discussion of form divisions, mnemonic devices, or notation system could approach.

We realize that these claims may seem too hopeful and too naïve. It may be that a specialist with his nose to the grindstone would not be interested in the broader relationships of knowledge. But in any case, this lack of interest would not be a fault of the library or librarian. A period classification would help actualize a relationship that is often said to exist now. It would do much toward making the library the hub of the academic life of the university.

THE CLASSIFICATION OF THE FOLGER SHAKESPEARE LIBRARY

EDWIN ELIOTT WILLOUGHBY

THE Folger Shakespeare Library contains the most complete collection in existence for the study of the life and works of the world's greatest dramatist. To say nothing of its thirty-seven thousand manuscripts, two hundred and fifty thousand playbills, and thirty-eight thousand prints—all of which present definite classification problems of their own—the library contains ninety-three thousand printed books and pamphlets (including several thousand duplicates, many of which are of especial value because of textual or association interest).

Although its printed books were selected for one purpose, the library covers many subjects. First, it attempts to include all source material on the life and works of Shakespeare, in the best form available, and all secondary studies of value. Again, it is intended to cover the history of Shakespeare's reputation, vogue, and influence as expressed in literature, scholarship, and art. Next, inasmuch as the life and works of Shakespeare cannot be understood and appreciated without a thorough knowledge of the period in which he lived, the Folger Library has a collection of source material on the varied phases of the social, political, economic, and religious life of the Elizabethan Era (in all, it possesses about twelve thousand English books printed before 1641 and about three thousand foreign books of the same period) together with modern studies of Elizabethan life. Similarly, as Shakespeare's works must be studied in relation to other literature, the productions of English and foreign authors, especially of the poet's contemporaries, together with important studies of them, are included in the collection. Further, as Shakespeare's art was dramatic, it is inevitable that a library devoted to his study should attempt to cover thoroughly not

only the theater of Shakespeare's day and the history of Shakespeare's plays upon the stage but also the general field of the British and American theater and even the foreign stage. Finally, the library has the inevitable reference section and a good bibliographical collection, especially strong in book-auction catalogs, which are of course valuable in tracing the provenance of copies.

The classification of the books of the Folger Shakespeare Library presents a problem which differs markedly from that of a general library. In the general library a book is considered (broadly speaking) according to its place in a universal scheme of knowledge; in the Folger Library it must be treated according to its relationship to the life, works, and study of Shakespeare.

To classify the books of the Folger Shakespeare Library it would have been possible, of course, to have utilized an existing system such as that of the Library of Congress. But although such a procedure would have avoided much detailed labor, it would have been subject to two decided disadvantages. In the first place, it would have necessitated the crowding of certain classes and the use of a call number of unwieldy length to bring out desirable subdivisions in them. Again, an objection—all the more real because it is subtle—lies in the body of habits formed by classifiers who have been trained in the use of a standard scheme of classification. In the Folger Shakespeare Library, for instance, many books are of interest because of items merely incidental to their author's main purpose, and they must be classified, therefore, in a way which varies from normal practice. Let us take as examples three books that stand almost side by side on the library's shelves in group 55.85 ("Biographies of modern British actors"). The autobiography of the journalist Mrs. Eliza D. Aria, *My sentimental self*, is of value to the collection because it contains material on Henry Irving and is classed accordingly with biographies of that actor. F. B. Barry's *Sinners through the ages* has a chapter on Edmund Kean and is classified without regard to other "sinners" treated therein.

Finally—a more extreme example—a copy of Stinson Jarvis' *Ascent of life* is of interest to the library solely because Ellen Terry has penciled in it extensive notes giving her reactions to the author's philosophy; it is classed, therefore, with Miss Terry's biography. It is easy to see, then, how constantly the peculiar needs of the library must be held in mind in the classification of each book. A classifier trained in the use of a standard system by habit connects groups of titles with customary classes in the system and is tempted to assign their symbols without going through the mental effort of considering, in each operation, the library's needs. By inaugurating a new scheme of classification, this possible clash between habit and judgment is avoided.

A special classification system also permits the avoidance of certain practices common to most schemes and often supported by formal logic but inexpedient for use in the Folger Shakespeare Library. Seldom, for example, does a reader desire to search through a run of periodicals which he finds shelved with the books on a subject in which he is interested. Instead, he usually obtains material from periodicals by means of printed bibliographies. This fact—to say nothing of the advantages in shelving—renders the grouping of all periodicals together in one alphabetical order preferable in this library. Again, as the library is not concerned with the general study of language, dictionaries, except those of Elizabethan English, are classed with general works and shelved near encyclopedias. Or, to take another example, foreign translations of the plays of Shakespeare are of little interest to students of the English text. They are, on the other hand, studied largely by persons interested in Shakespeare's influence in a particular country or in the work of a translator. For this reason, foreign translations of Shakespeare are arranged together, divided by languages, and shelved apart from the English text. Again, in arranging sections of sub-classes, it has frequently been found that an alphabetical grouping may be preferable to a logical one. For example, the local history and topography of England are arranged for the most

part alphabetically by county rather than by some geographical sequence. Any geographical grouping, it is easy to see, must separate some adjacent counties and, at the same time, is of value only to the reader who has the map of England clearly in mind. The alphabetical order, however, is obvious to all. On the other hand, the alphabetical arrangement in certain subclasses where it normally would be employed is not well suited to the needs of the Folger Library. Biographies of Shakespeare, for example, are arranged chronologically by date of publication, rather than alphabetically by author, because it is desirable to have readily available the picture of the development of our knowledge of Shakespeare's life and to be able to ascertain the state of Shakespearean biography at any one period.

Finally, to note a few minor matters, mnemonic devices are employed in the Folger Shakespeare Library classification whenever practicable, and similar classes are, of course, divided in a similar manner. By the use of both Olin and Cutter alphabetizing numbers, it has often been possible to include in one class treatments of a subject as a whole, and of individuals, institutions, and even places which as component units receive particularized discussion, and thus to avoid multiplicity of classes. Again, considerable labor has been saved in dealing with miscellaneous modern works of slight Shakespearean interest but of value for general reference by the simple device of assigning them the number 09. plus the appropriate Dewey Decimal number (shortened when possible). Thus the Folger Library classification is a specialized scheme with, as one of its subclasses, a general system which provides a place for every subject.

In general, the scheme of classification of the Folger Shakespeare Library is climactic, beginning with general works and culminating with the writings of Shakespeare. In structure it is a decimal system composed of ten classes, each divided into ten subclasses, which are in turn divided into sections and subsections as the needs of the collection demand. The plan can probably be most easily shown by listing the classes and placing

beside them a few typical subclasses and sections to show the content of each class:

- 00 General and miscellaneous works.....01 Encyclopedias; 02 Modern dictionaries; 04 Periodicals; 08 General collected biography; 09 (plus appropriate Dewey Decimal number) Miscellaneous works not provided for elsewhere.
- 10 Bibliography.....13 Book auction catalogs; 17 Printing and publishing; 18 Library science; 19 Library history.
- 20 Music.....23 Elizabethan musical instruments; 28 Shakespeare's words set to music; 29 Adaptations and parodies of Shakespeare's plays.
- 30 History and topography.....34 English genealogy and heraldry; 36Wa5 Stratford-on-Avon; 37 Scotland.
- 40 Literature.....42.26 The English sonnet; 45D37(6) Thomas Dekker—biography; 45M64(9) pl Milton, *Paradise lost*; 46D84(6) Dryden—biography.
- 50 Drama and stage.....52.3 History of the early English drama; 53.3 History of the Elizabethan drama; 53.56 The King's Players; 53.85B89 Biography of Richard Burbage; 55.85T27 Biography of Ellen Terry
- 60 Shakespeare's background (the social life of Elizabethan England).....62 Accounts of travelers and visitors to England (1550-1660); 63 Diaries and commonplace books of Elizabethans; 64 Biographies of Elizabethans; 65.25 Elizabethan home life; 65.78 Elizabethan surgery; 69 Modern imaginative literature illustrating Elizabethan life.
- 70 Shakespeare—biography and similar studies.....70.2 Concordances; 71 Biographies; 72.4 Shakespeare's marriage; 73 Iconography; 75.47 Shakespeare's interest in law; 75.84 His interest in the supernatural; 76 Anniversaries and celebrations; 79 Shakespeare forgeries.

80 Shakespeare—study and
criticism..... 80.3 Shakespeare's handwriting; 81.2
Shakespeare's plots; 83 Shakespeare's
sources; 87.2 Lives of Shakespearean
scholars; 88.8 Eccentric literature on
Shakespeare; 89 Authorship controversy.

90 Shakespeare's works..... 90.1709 Shakespeare's *Works*, ed. Rowe
(1709-10); 94.13 *Hamlet* (texts); 94.15
Hamlet—sources; 94.17 *Hamlet*—the
character problem; 94.27 *Henry V*
(texts); 94.28 *Henry V*—criticism and
studies; 95.3 *Venus and Adonis* (texts);
96 Shakespeare apocrypha; 97.34-695
Othello (adaptations) in Dutch.

In making the scheme of classification for the Folger Shakespeare Library the compiler received valuable aid from Mr. Charles Martel and Mr. James B. Childs, of the Library of Congress, and Dr. Joseph Q. Adams, director of the Folger Shakespeare Library.

A STUDY OF CHINESE COLLEGE LIBRARY PERSONNEL¹

VI-LIEN WONG

IT HAS often been stated that there are three main essentials in the organization and administration of a library in a community or in an institution, namely: staff, books, and building. Without an adequate building a library may still be an active one giving efficient service to the community if it has a workable book collection organized and administered by a competent staff. Without books a library will, of course, cease to be a library; but without a competent staff even a satisfactory book collection will not yield a service that will suit the needs of the clientele. In his book on *Personnel*, G. R. Hulverson introduces the subject by saying:

The assets of any business may be thought of as divided into two general classes. There are those things which are tangible or measurable in definite financial terms. These are represented by buildings, tools, equipment, stores and funds. . . . The second type of asset is represented by the personnel of the organization which puts these other things to work. Physical assets do not of themselves earn profits. Their value is not realized until they are co-ordinated with the necessary human activity.²

In this sense, we can see that the personnel of an organization is an asset without which the other elements of the business are nonproductive. The importance of an efficient personnel in the organization and administration of a library needs no further elaboration. The college library in its relation to the university as an integral and vital part of the educational program certainly demands an efficient personnel to carry on its many-sided activities. W. M. Randall, in his book on *The college library*, has said:

A well-trained, efficient staff may compensate in some degree for a meager library budget or for a poorly planned building. Even an unsatisfactory book

¹ Material partly condensed and partly revised from results of a study submitted as an academic exercise in the School of Library Service, Columbia University.

² G. R. Hulverson, *Personnel* (New York: Ronald Press Co., ca. 1927), p. 1.

collection will give better service and fill more of the needs of the students and faculty if it is administered by a competent staff.³

Statement of the problem.—Librarianship in China has had a considerable growth during the past fifteen years. Owing to the rapid spread of the modern library movement and the rise in the number of libraries during recent years, the field of library work is one of growing importance.⁴ There has been a greater demand for library workers than ever before, and an increasing number of youths desire to prepare themselves for a career in this field. However, little factual information is available concerning the new profession of librarianship in China—a situation which has resulted in a failure to provide the future librarian with the necessary information concerning the possibilities and needs of the field which he is entering.

The purpose of this study is twofold: first, to discover the present status of library personnel in institutions of higher learning in China; and second, through a study of the present status of personnel in Chinese college libraries, regarding appointments and promotions, qualifications, duties, academic status, salaries, working conditions, staff privileges and welfare, to discover the immediate needs of these libraries. Primarily, this study is an attempt to make a factual analysis of the present status of personnel in Chinese college libraries.

Since the establishment of the Chinese Republic in 1912, China has undergone a change in intellectual problems as well as in politics. Among institutions whose existence depends upon their ability to meet the public demand, the college library is face to face with rapidly changing educational conditions. Practically every institution of higher learning in China now has a library of some note. Over twenty college libraries have modern buildings of their own, while several others have building plans under way.⁵ The library building is, as a rule, the most

³ W. M. Randall, *The college library* (Chicago: American Library Association, 1932), p. 51.

⁴ T. P. Yang, "Librarianship, a new profession in China," *Chinese nation*, I (November 26, 1930), 538, 555-56.

⁵ T. L. Yuan, "Modern libraries in China," *North China daily news*, December 13, 1929.

beautiful and comfortable building on the college campus. At present the college libraries in China are more efficiently administered, richer in collections, and better in service than the public libraries.⁶

Scope of the study.—According to the statistics compiled by the Ministry of Education in 1933, there were in China thirteen universities supported by the central government, nine supported by the provincial governments, and nineteen private universities, making a total of forty-one.⁷ Twelve of the thirteen universities supported by the central government (known as national universities) and three of the nine universities supported by the provincial governments have been selected for this study. Added to the foregoing fifteen are eighteen private colleges and universities, of which eleven are missionary institutions, together with two others not registered with the national government and therefore not included in the statistics published by the Ministry of Education.

With the exception of one, only those colleges and universities which maintained both a college of arts and a college of science were considered in the selection of institutions for this study. If all college and university libraries had been included, the resultant picture would have been unfair and mistaken, since many colleges are exceedingly small and technical in character and have a different type of personnel for the administration of their libraries. In many small colleges, especially the technical colleges, we find an instructor employed to perform the functions of a librarian and at the same time carry on teaching duties in other departments. For valid reasons it has therefore seemed best to limit this investigation in some such respects.

Procedure.—For the information which this study sought to obtain, it was necessary to rely almost entirely on the questionnaire method. In the fall of 1935 a detailed questionnaire of sixty-three questions was sent to thirty-five college and univer-

⁶ A. K. Chiu, "Modern library movement in China," in *Libraries in China* (Peiping: Library Association of China, 1935), p. 16.

⁷ China. Ministry of Education. *The first China education year book* (Shanghai: Kai-ming Book Co., 1934), sec. C, p. 1. (In Chinese.)

sity libraries in China. Of these, twelve were the libraries of national universities, three were provincial, and twenty were private, of which thirteen were missionary. Replies were received from twenty-six libraries, or 74.2 per cent of the total number. Among these were eight national universities, two provincial universities, and sixteen private universities, of which twelve were missionary institutions. Following is a list of the names of these twenty-six college and university libraries:

National:

National University of Chekiang Library, Hangchow
National Chiao-tung University Library, Shanghai
National Chi-Nan University Library, Shanghai
National Peiping Normal University Library, Peiping
National University of Peking Library, Peiping
National Sun Yatsen University Library, Canton
National Tsing Hua University Library, Peiping
National Wu-Han University Library, Wuchang

Provincial:

Provincial Anhwei University Library, Anking
Provincial Honan University Library, Kaifeng

Private:

University of Amoy Library, Amoy
Great China University Library, Shanghai
Kwang Hua University Library, Shanghai
Nankai University Library, Tientsin

Missionary:

Catholic University Library, Peiping
Central China University Library, Wuchang
Cheeloo University Library, Tsinan
Fukien Christian University Library, Foochow
Hangchow Christian College Library, Hangchow
Lingnan University Library, Canton
University of Nanking Library, Nanking
St. John's University Library, Shanghai
University of Shanghai Library, Shanghai
Soochow University Library, Soochow
West China Union University Library, Chengtu
Yenching University Library, Peiping

There is a cause for regret in the fact that the percentage of returns was not higher, and in the fact that no reports were received from several libraries from which valuable contributions

had been expected. Especially regrettable is the omission from the report of some of the national university libraries, particularly National Central University Library at Nanking, Szechuan University Library at Chengtu, and Shantung University Library at Tsingtao.

The purpose of this study, as mentioned previously, is to present all of the essential facts which could be ascertained concerning existing conditions affecting Chinese college library personnel. In summarizing what seemed to be the essential facts on each topic, the author has tried, in general, to present an accurate description of the most generally prevailing forms of practice; to describe, wherever necessary, the important variations from the prevailing forms; and to cite, wherever possible, some of the most interesting illustrations both of the prevailing forms and of the less usual.

In an effort to eliminate all that was of such doubtful significance that its presentation would be subject to misinterpretation, the author has endeavored to verify all replies to the questionnaires, first, by checking with the publications of the different libraries, university catalogs, and other publications, and then, in cases where time allowed, by submitting to the librarians concerned, for their explanation or correction, all statements which were at all ambiguous or open to possible misinterpretation. The process of verifying statements, first by careful checking and then by follow-up letters, for about two-thirds of the libraries which replied early has brought most convincing evidence.

GENERAL HISTORICAL BACKGROUND

For the purpose of supplying a necessary background, this study is preceded by a brief general statement regarding the development of libraries in China, the growth of Chinese college libraries, and the training of Chinese college librarians. No attempt has been made here to present the details regarding the general development of libraries in China, the growth of Chinese college libraries, or the training of Chinese college librarians, but a few general statements are deemed necessary. First, li-

braries in China, though developed at a very early date, were in the past regarded simply as places in which to keep books—storehouses of knowledge where stress was laid on mere preservation rather than on actual use. Gradually the libraries in China, especially the college libraries, have been put on a more utilitarian basis.

Second, higher education in the modern sense began to develop in China in the middle of the nineteenth century. There were libraries and a kind of library service in the early educational institutions, of course, but there has been very little material in print about the origin and growth of these libraries. Because of the lack of authentic records, a casual survey of the growth of Chinese college libraries must be limited to only a few of the earlier ones connected with this study.

A study of the replies to the questionnaires shows that only one library was founded before 1900; 30.7 per cent of the libraries reporting were founded between the years 1901 and 1910; 34.6 per cent were established between 1911 and 1920, and the remaining 30.7 per cent between 1921 and 1930. It also shows that the missionary institutions took the lead in the instalation of libraries as part of the equipment of the educational institutions. The earliest library was founded in 1894 and the latest in 1930. In the thirty-seven years from 1894 to 1930, during which these twenty-six libraries developed, eleven of them were evolved in the first half of the period, 72.7 per cent of which were missionary institutions. Of the fifteen others which were evolved in the second half of the period, 46.6 per cent were government supported, 26.6 per cent were privately financed, and the remaining 26.6 per cent were missionary institutions.

Third, since the gradual disappearance of the old idea regarding the librarian as only a keeper of books, there has been a growing demand for trained librarians. Chinese librarians who had years of practical experience in administering libraries at home went to America to continue their studies in the new profession. Library schools in one form or another have been inaugurated in the home country to give courses in library science

and administration. The only library school in China at present is the Boone Library School, founded in 1920 by the late Miss Mary Elizabeth Wood, an American missionary connected with Boone University, Wuchang, now known as Central China University. Many of the young librarians now occupying important positions in libraries all over the country are graduates of the Boone Library School. But the demand for trained librarians is larger than the Boone Library School can supply, hence apprentice courses, summer schools, and full college courses were introduced and are given at some of the colleges. Besides, there are now also increasing opportunities offered to Chinese librarians for more advanced training and study abroad.

PRESENT STATUS OF PERSONNEL IN CHINESE
COLLEGE LIBRARIES

In spite of the progress described above, most of the libraries in China are, as Dr. Bostwick has remarked, "functioning somewhat as libraries in the United States were doing 50 years or more ago."⁸ Compared with those of Europe and America, Chinese libraries are still in the beginning of a period of real development. The constructive work from now on is not only along the line of adequate buildings and rich collections but also toward an efficient personnel to insure effective service. The administrative, technical, and educational duties involved in the work of a librarian are real problems in the Chinese library today, and all these require a personnel trained to perform them efficiently. An analysis of the returns from twenty-six libraries replying to the questionnaire reveals many facts concerning the present status of the personnel in some of the outstanding college libraries in China.

For purposes of study and analysis the national, provincial, and private college and university libraries are divided into three classes according to the number of volumes: Class A for those having more than 100,000 volumes; Class B, 50,000-100,000 volumes; and Class C, 20,000-50,000 volumes. The figures

⁸ A. E. Bostwick, "Reports of Arthur E. Bostwick's mission to China as A.L.A. delegate," *Bulletin of the American Library Association*, XX (February, 1926), 35-48.

used in this study are all for the same academic year, 1934-35. Of the twenty-four libraries which have replied on this item, 70.8 per cent have their fiscal year ending with June 30; 20.8 per cent with July 31; and 8.3 per cent with August 31.

Holdings of the libraries.—In China every library has two separate collections of books, one in Chinese and the other in

TABLE I
HOLDINGS OF THE LIBRARIES OF THE TWENTY-SIX
INSTITUTIONS, 1935

Institution	Chinese	Occidental	Total
Yenching Univ. Lib.	242,175	42,908	285,083
Tsing Hua Univ. Lib.	198,804	80,559	279,363
Sun Yat-sen Univ. Lib.	243,658	27,709	271,361
Peking Univ. Lib.	169,897	68,473	238,370
Nankai Univ. Lib.	117,115	33,583	150,698
Lingnan Univ. Lib.	95,512	43,001	138,513
Nanking Univ. Lib.	105,877	24,203	130,080
Wu-Han Univ. Lib.	85,445	35,892	121,337
Chehoo Univ. Lib.	95,109	19,892	115,001
St. John's Univ. Lib.	79,140	24,052	103,192
Peiping Normal Univ. Lib.	72,773	14,706	87,479
Chiao-tung Univ. Lib.	60,000	15,000	75,000
West China Union Univ. Lib.	60,388	14,465	74,853
Shanghai Univ. Lib.	53,272	20,200	73,472
Catholic Univ. Lib.	56,892	15,075	71,967
Amoy Univ. Lib.	48,495	20,410	68,906
Honan Univ. Lib.	61,251	7,438	68,689
Central China Univ. Lib.	41,541	26,235	67,776
Fukien Christian Univ. Lib.	48,836	14,483	63,319
Chekiang Univ. Lib.	42,837	15,916	58,753
Chi-Nan Univ. Lib.	38,622	10,033	48,655
Soochow Univ. Lib.	28,805	12,261	41,066
Hangchow Christian College Lib.	29,244	7,925	37,169
Great China Univ. Lib.	32,913	3,861	36,774
Anhwei Univ. Lib.	28,000	2,700	30,700
Kwang Hua Univ. Lib.	19,517	6,462	25,979

occidental languages, mostly English. According to the statistics received, the holdings of these twenty-six college libraries were as shown in Table I. From this table it is found that the number of books reported by the twenty-six libraries shows a wide range extending from 25,979 volumes to 285,083 volumes, the average for all libraries being 106,290. The largest library in

point of volumes is ten times as large as the smallest. The smallest library is about one-fourth as large as the average for all the libraries included in this study, and the largest library is almost three times as large as the average. Of the total number of libraries, 38.4 per cent are reported to fall into Class A; another 38.4 per cent fall into Class B; and the remaining 23 per cent fall into Class C.

Size of staff.—The sizes of the staffs vary widely in the different groups of libraries studied. Table 2 shows the minimum and

TABLE 2
SIZE OF LIBRARY STAFF, 1934-35

Group	Number of Libraries Reporting	Minimum	Maximum	Average
Class A.....	10	7	36	18.6
Class B.....	10	6	15	8.9
Class C.....	6	4	10	5.6

maximum number of members on the staff in the libraries reporting, and the average number of members on the staff in each of the three classes of libraries.

Number of patrons served.—W. M. Randall has remarked that it would seem reasonable to expect that the size of the library staff would increase generally with the size of the college enrolment and the size of the book collection.⁹ This is by no means general among Chinese college libraries, though in a few cases it is found to be true. From the twenty-six replies to the questionnaires, it has not been possible to find any correlation between the size of staff in a library and the amount of work done. The average annual increase of books in the twenty-six libraries studied is 8,128 volumes, and the average annual circulation is 51,221. The library that has the largest staff does not have the highest annual increase of books or the largest circulation. In the library that has the next largest staff the annual circulation of books is but one-half of the average circulation of all the li-

⁹ *Op. cit.*, pp. 52-53.

TABLE 3
NUMBER OF PATRONS SERVED, 1934-35

GROUP	NUMBER OF LIBRARIES REPORTING	FACULTY			STAFF			STUDENTS		
		LOW	HIGH	AVERAGE	LOW	HIGH	AVERAGE	LOW	HIGH	AVERAGE
Class A....	7	89	186	132.5	34	114	79.1	438	1,670	959.2
Class B....	10	36	202	114.7	20	160	60.8	165	1,020	670.8
Class C....	6	48	208	101.1	23	98	58.1	270	1,216	829.5

TABLE 4
RELATION OF SIZE OF STAFF TO BOOKS ADDED AND SERVICE RENDERED, 1934-35

Institution	Number of Staff	Books Added	Borrowers Registered	Volumes Circulated	Number of Agencies	Number of Patrons Served	Volumes Added per Staff Member	Patrons Served per Staff Member
Peking Univ.....	36	11,172	1,051	71,172	5	?	310.3	?
Yenching Univ.....	32	15,931	970	26,849	10	972	497.8	30.3
Tsing Hua Univ.....	23	21,465	?	69,549	1	1,443	933.2	62.7
Sun Yatsen Univ.....	22	11,380	2,232	27,437	9	?	517.2	?
Lingnan Univ.....	16	21,858	480	18,643	4	1,471	1,366.1	91.9
Wu-Han Univ.....	16	23,341	577	30,000	3	824	1,458.8	51.5
Nanking Univ.....	15	5,247	820	90,958	4	1,898	349.8	126.5
Peiping Normal Univ.....	15	17,902	711	26,700	1	937	1,193.4	62.4
Chiao-tung Univ.....	14	5,134	631	49,919	1	930	366.7	66.4
Nankai Univ.....	11	11,241	416	58,920	3	592	1,021.9	53.8
Catholic Univ.....	10	5,680	?	72,227	5	1,218	568.0	121.8
Chekiang Univ.....	10	7,565	986	25,318	4	1,185	756.5	118.5
Chi-Nan Univ.....	10	3,524	1,251	233,280	6	1,296	352.4	129.6
Cheeloo Univ.....	8	2,493	498	32,891	2	?	311.6	?
Fukien Christian Univ.....	8	5,952	230	21,713	1	229	744	28.6
Amoy Univ.....	7	1,593	?	16,600	1	806	227.5	115.1
Honan Univ.....	7	7,281	755	187,269	1	877	1,040.1	125.2
St. John's Univ.....	7	6,658	608	45,752	3	997	951.1	142.4
Central China Univ.....	6	1,771	2,233	7,452	1	638	295.1	106.3
Great China Univ.....	6	4,383	1,064	63,420	1	1,428	730.5	238.0
Shanghai Univ.....	6	3,833	950	35,000	5	1,133	638.8	188.8
West China Union Univ.....	6	6,613	510	24,882	9	510	1,102.1	85.0
Hangchow Christian College.....	5	3,019	641	52,416	1	700	603.8	140.0
Kwang Hua Univ.....	5	1,793	476	9,734	1	1,379	358.6	75.8
Anhwei Univ.....	4	2,440	270	13,975	1	369	610.0	92.2
Soochow Univ.....	4	2,076	650	19,692	2	761	519.0	190.2

braries studied, and the annual increase of books is only about twice as large as the average of all the twenty-six libraries reporting. Table 3 shows only the minimum and the maximum number of patrons served in the twenty-three libraries reporting. Table 4 will give some idea as to the size of staff in relation to the service rendered.

TABLE 5
RELATION BETWEEN TOTAL LIBRARY BUDGET AND EXPENDITURE
PER STUDENT, 1934-35

Institution	Library Budgets	Percentage of Total Budget	Number of Students	Expenditure per Student
Tsing Hua Univ.	\$155,000.00	20.0 [!]	1,154	\$134.31
Wu-Han Univ.	100,000.00	10.0	621	161.03
Yenching Univ.	74,510.00	10.0	760	98.03
Sun Yatsen Univ.	70,000.00	28.0	?	?
Lingnan Univ.	58,604.00	7.32	1,233	47.91
Chiao-tung Univ.	55,000.00	7.0	700	78.57
Nankai Univ.	47,131.00	12.0	438	107.60
Chekiang Univ.	46,724.00	6.0	893	52.32
Peiping Normal Univ.	36,000.00	4.15?	711	50.63
Nanking Univ.	35,000.00	6.36?	1,670	20.95
Honan Univ.	20,000.00	5.0	697	28.69
Amoy Univ.	16,000.00	20.0 [!]	678	23.59
Great China Univ.	15,000.00	?	1,216	12.33
West China Union Univ.	13,660.00	?	349	39.14
Chi-Nan Univ.	12,812.05	3.0	990	12.94
St. John's Univ.	12,383.00	3.68	849	14.58
Anhwei Univ.	12,000.00 [!]	4.0	270	44.44
Shanghai Univ.	12,000.00	5.0	1,020	11.76
Catholic Univ.	10,000.00	2.6	960	10.41
Fukien Christian Univ.	10,000.00	5.0	165	60.60
Kwang Hua Univ.	8,700.00	7.0 [!]	1,214	7.16
Cheeloo Univ.	7,850.00	1.5	?	?
Central China Univ.	7,000.00	3.47?	535	13.08
Hangchow Christian College	6,680.00	2.46?	617	10.82
Soochow Univ.	6,000.00	27.0 [!]	670	8.95
Peking Univ.	?	?	?	?

Annual library budgets.—Owing to the lack of printed material, any systematic study of the annual library budgets of the different institutions is impossible. According to the replies to the questionnaires, the annual budgets of the twenty-five libraries which reported on this item vary from \$6,000 to \$155,000. The highest budget is almost twenty-six times as large as

the lowest, while the lowest is only a little over one-fifth of the average of all the twenty-five libraries—\$33,922.16. The highest percentage of the total income of an institution devoted to the library is 28 and the lowest is 1.5. An average amount of 8.6 per cent of the total budget of the institution is spent for the library. The annual library expenditure per student varies from \$7.16 to \$161.03 in the twenty-three libraries reporting, the average being \$45.64. The comparative data of the different libraries are shown in Table 5.

Appointments and promotions.—From a study of the twenty-six replies received, it is evident that there are quite well-established practices among the Chinese colleges and universities in the matter of appointments to the library staff and the period for which the appointments are made. There is, however, much less rigid regulation in regard to promotion in rank and increase in salary after the appointments are made, and it is one of the matters in which the Chinese college librarian has very little chance to exercise any authority. Advancement and increase in salary seem to depend more on the financial condition of the institution in which the library is located than on the record of service rendered.

Librarian.—In 88.4 per cent of the college and university libraries reporting, appointment of the librarian is made by the president. Only three of the libraries show variations in formal procedure. At the University of Shanghai the formal appointment of the librarian is made by the administrative council on recommendation of the president and the faculty council. At the West China Union University the librarian is appointed by the faculty council alone. The librarian of Central China University is appointed by the bishop of the diocese of Hankow representing the board of trustees of the University.

Out of twenty-six libraries, 57.6 per cent report that the librarian is responsible to the president. In 26.9 per cent of the libraries the librarian is responsible to the dean of faculty. The librarian of the University of Chekiang is responsible to the president as well as to the dean of faculty. In three others the librarian is responsible either to the administrative council and

the board of trustees, as in the case of the University of Shanghai, or to the representative of the board of trustees alone, as in the case of Central China University. The librarian of West China Union University is responsible to the faculty council which appoints him.

Staff appointments.—Of the twenty-six libraries reporting, 73 per cent indicate that appointments of staff members are made by the president, over half of which add "on the recommendation or approval of the librarian." In 15.3 per cent the librarian makes the appointments, except in one case where the approval of the library committee is required. Cheeloo reports "higher ones by the president and librarian; lower ones by the librarian." At West China Union University the library committee alone makes the appointments. Hangchow Christian College reports that the appointment of staff members is made by both the president and the dean of faculty.

No student assistants are employed on the library staff in 53.8 per cent of the libraries. In libraries where such help is used the student assistants are selected by the librarian, except in Great China University, where the selection is recommended by the president. The University of Amoy reports that the selection of student assistants by the librarian has to be supported by the approval of the president. At Yenching the student assistants are selected by the librarian on the recommendation of the student self-help committee. At Lingnan the selection of student assistants is made partly by the librarian and partly by the students' aid committee.

Appointments are made for a definite period of one year in 65.3 per cent of the libraries. In six libraries the appointment is made for an indefinite period. At Chiao-tung the appointment of the librarian is made for one year, while for the other members of the staff it is for an indefinite period. At Anhwei University the appointment is made only for one semester.

That there are contracts when the appointments are made is reported in 61.5 per cent of the libraries; in 15.3 per cent there are no contracts. Chiao-tung reports that only the librarian has a contract. At the University of Shanghai only the assist-

ant, or associate, librarian has a contract. Hangchow Christian College reports that contracts are made once only, at the time of the first appointment. At West China Union University there are contracts for the senior assistants only, while Central China University has contracts for division chiefs only. Cheeloo reports that there are contracts for all except in one case.

Qualifications requisite for appointment.—In regard to general and professional educational qualifications requisite for appointment, 26.9 per cent of the libraries report that there are no definitely defined regulations, and in all others the reported re-

TABLE 6
QUALIFICATIONS REQUISITE FOR APPOINTMENT TO
LIBRARY STAFF

Position	Number of Libraries Reporting	Educational Requirements	Technical Requirements
Librarian.....	19	College graduate	Professional training with or without library experience
Assistant librarian.....	6	College graduate	Professional training with or without library experience
Division chief.....	17	College graduate	Professional training or library experience
Senior assistant.....	17	Senior middle-school graduate	No definite requirements
Junior assistant.....	14	Junior middle-school graduate	No definite requirements

quirements do not cover all the positions mentioned. This is most probably a case where the question of finance dictates the kind of staff needed. Table 6 shows the prevailing practice as to general requirements.

Tsing Hua reports that the librarian must be one who has had professional training abroad, either in Europe or America, and one who has had successful experience as librarian of a good-sized library at home. It also requires the division chief to be a library-school graduate at home or to possess equivalent educational qualifications and library experience. At Wu-Han University and West China Union University the librarian must be concurrently a member of the faculty.

Intelligence tests.—In 76.9 per cent of the libraries reporting no use is made of intelligence tests, either as a basis for appointment or promotion or as an aid in assignment of work. Sun Yatsen University reports that new employees having no professional training or experience are appointed after a period of apprenticeship. Tsing Hua and Fukien Christian University state that new appointments are made after some kind of general test or examination. At Yenching clerical staffs are employed after examination, and professional staffs are put on probation after appointment. At St. John's the appointment of clerical staff is made after an interview by the librarian. Lingnan reports that appointments of new employees are made on the basis of their past school records.

Principles of promotion.—There are no definite regulations regarding promotion in rank and increase of salary for the staff members in 46.1 per cent of the libraries reporting. Efficiency and length of service are reported by 42.3 per cent of the libraries as factors governing promotion and increase of salary, but no mention is made as to the librarian's decision in the matter of salary increase. Only five libraries report that promotion and salary increase of the staff members have to be recommended by the librarian. At St. John's, especially at times of financial retrenchment, the librarian is not approached in matters of salary increase for the members of the library staff, increase of salary, if any, being uniform for all members of the whole university staff.

Twenty-three per cent of the libraries report that increase of salary depends on the financial condition of the institution served. Tsing Hua reports that the members of the library staff advance in salary in the same scale as the members of other staffs of the university. Wu-Han University states that professional staff doing satisfactory work is advanced once every two years, clerical staff once a year. Great China University reports that staff members making good records receive a raise in salary every two years but are "now even reduced." At the University of Shanghai an annual increase of about 10 per cent

of salary is made. Sun Yatsen University reports that there are definite regulations governing promotion and increase of salary.

Only 19.2 per cent of the total number of libraries reporting indicate that increase in salary means promotion in rank and responsibility, while the others report that salary increase does not necessarily mean promotion in rank and responsibility. In 73 per cent of the libraries vacancies on the library staff are sometimes filled by promoting someone from a lower position and at other times by new appointments; others report definitely that vacancies are filled by new appointments.

Qualifications, duties, and status.—An analysis of the replies to the questionnaires from the twenty-six libraries has revealed the fact that the general and professional educational qualifications of Chinese college librarians are good in general and that their duties are well defined. But in matters of academic status and faculty ranking the Chinese college library suffers seriously from the lack of uniform standards. The Chinese college librarian is seldom represented at the administrative meetings of the institution or in the meetings of the teaching faculty. The head of the library can be criticized for anything he does, but he has no opportunity to express his opinions and to defend his position. Except for a few librarians who have teaching duties, the Chinese college librarian is regarded always as inferior to a member of faculty of the same rank.

General and professional qualifications.—With the exception of four, all the libraries report that the librarian has good general educational qualifications, all the librarians being graduates, with academic degrees, from either a college or a university at home or abroad. Over half of these are graduates from universities abroad. In 65.3 per cent the librarian has had professional library-school training; two librarians have had short courses only, but in two-thirds of the libraries the librarian has had library-school training abroad.

Nineteen libraries report that the librarian has had previous library experience, varying from a period of one or two years to over twenty-five years. The librarian of Central China University, having been connected with the Boone Library School

since the time of its inception, has had twenty-six years of experience not only in active college library work but also in training Chinese library workers. Table 7 shows the general status of Chinese college librarians as based on reports from twenty-six libraries, giving the educational qualifications, the kind of professional training, and the extent of previous library experience as it was at the time when the questionnaire was answered.

TABLE 7
STATUS OF CHINESE COLLEGE LIBRARIANS, 1934-35

Qualifications	Degrees Held	Number of Librarians Reporting	Percentage Represented
General education	B.A., B.S., M.A., M.S., Ph.D., Dr.Phil.	22	84.6
Professional training	B.L.S., B.S., M.S., Ph.D.	17	65.3
Library experience		19	73.0

Duties.—In 69.2 per cent of the libraries reporting, the librarian has no teaching duties. In others the position is filled either by a librarian who undertakes teaching duties in addition to his responsibilities or by a member of the teaching faculty who serves incidentally as librarian. The subjects taught by librarians include chemistry, Chinese poetry, history, library science, history of literature, philosophy, and political science. In only four libraries the librarian teaches library science.

Most of the college librarians in China have no other special duties besides library duties; only six libraries state that the librarian has other duties. At Tsing Hua the position of librarian is at present temporarily being filled by a member of the faculty who is head of the department of Chinese. The librarian of the University of Nanking is both executive secretary of the university and dean of the college of arts. The librarian of Central China University is also director of the Boone Library School. The Librarian of Lingnan is a member of the college publications committee and of the research work committee. The University of Chekiang and Fukien Christian Uni-

versity also report that the librarian has some committee activities.

All except four of the libraries reporting have indicated the existence of a faculty library committee. The librarian's position on the committee varies in different libraries. At St. John's the librarian is not listed in the library committee and is not considered a member, but he calls and attends the meetings of the committee whenever necessary. Table 8 shows the analysis of the duties of Chinese college librarians.

TABLE 8
ANALYSIS OF THE DUTIES OF CHINESE COLLEGE
LIBRARIANS

Duties	Number of Libraries Reporting	Percentage Represented
Library duties only.....	18	69.2
Teaching duties.....	8	30.7
Head of other departments.....	3	11.5
<i>Library committee:</i>		
As secretary.....	10	38.4
As chairman.....	4	15.3
As a member.....	4	15.3
As ex officio member.....	2	7.6
Attend meetings.....	2	7.6
Other committee work.....	3	11.5

Academic status.—There is a great lack of uniformity in the matter of academic status and faculty ranking among librarians. In some of the institutions where it is reported that the librarian is ranked as professor, it is found that such ranking is granted to him only because of his academic status on the teaching faculty. Tsing Hua reports that the librarian is ranked the same as the university registrar; Anhwei University reports "college staff"; and University of Nanking reports "same as deans of departments." At St. John's the librarian reaches the rank of professor according to his length of service and salary, but he is not entitled to all the privileges attendant on the rank.

In 65.3 per cent of the libraries reporting, the librarian is on the same salary scale as the members of the faculty. Three libraries report that the salary of the librarian is less than that of

TABLE 9
ANALYSIS OF THE STATUS OF CHINESE COLLEGE
LIBRARIANS

Status	Number of Libraries Reporting	Percentage Represented
<i>Academic ranking:</i>		
As professor.....	8	30.7
As lecturer.....	1	3.8
As instructor.....	6	23.0
As head of department or administrative officer.....	3	11.5
Not defined.....	8	30.7
<i>In the faculty:</i>		
Seat and vote.....	10	38.4
Seat only.....	3	11.5
None.....	13	50.0
<i>In senate or council:</i>		
Seat and vote.....	8	30.7
Seat only.....	8	30.7
None.....	10	38.4
<i>In academic gatherings:</i>		
As professor.....	3	11.5
As instructor.....	2	7.6
As administrative officer.....	2	7.6
As head of department.....	4	15.3
Not defined.....	15	57.6
<i>In university catalog:</i>		
As officer of administration.....	20	76.9
Not as administrative officer.....	6	23.0
Total.....	26	100.0

faculty members of the same rank. Anhwei University reports that the librarian has the same salary as the head of a department. Nankai reports that there is no basis for comparison.

The question of seat and vote entitled to librarians in the faculty and in the university senate or council shows a similar

lack of uniformity among the libraries reporting. The place given to the librarian in the academic procession or seat assigned on the platform at academic gatherings also varies. Table 9 shows an analysis of the status of Chinese college librarians in regard to academic ranking, seat and vote in the faculty and senate or council, position in academic gatherings, and in the university catalog.

The general education, professional training, and library experience of the other members of the staff, aside from the librarian, are most varied. The position of assistant librarian as reported in three libraries is held by college graduates; in another library, by a library-school graduate; and in still another library, by a middle-school graduate who has had a summer library course. In 46.1 per cent of the libraries reporting the position of division chief is held by college graduates; in three others, by either college undergraduates or graduates of senior middle-school. The position of senior assistant is also quite complicated, 34.6 per cent reporting that the position is filled by college graduates; 23 per cent by graduates of senior middle-school; in one library by a graduate of junior middle-school. The position of junior assistant is reported by 38.4 per cent of the libraries as filled by graduates of senior middle-school, and in 19.2 per cent, by graduates of junior middle-school.

In 46.1 per cent of the libraries, where there are student assistants, the students do a great variety of work, including the regular loan work, the reserve-book-desk duties, the periodical-reading-room work, evening work, shelving, typing, labeling, and newspaper clipping. Yenching reports that student assistants merely do "simple mechanical work." As to difficulties in using student assistants, the libraries report that there are so many students in whom the lack of a sense of responsibility is evident that proper supervision is necessary. Central China University reports that "mistakes are unavoidable and work should be outlined for them in order to achieve any accomplishment."

Salaries.—In Tables 10, 11, and 12 are shown the highest, the lowest, and the average salaries reported for various positions

on the staff in the three classes of libraries studied. An analysis of these tables reveals several interesting facts. Of the twenty-six libraries reporting the best salary scales are to be found in

TABLE 10
SALARIES OF CHINESE COLLEGE-LIBRARY PERSONNEL

Class A	Librarian	Assistant Librarian	Division Chief	Senior Assistant	Junior Assistant	Student Assistant
Number of libraries reporting...	10	2	9	9	9	5
Lowest salary reported.....	\$ 840	\$ 300	\$ 840	\$ 660	\$ 360	\$0.25 per hour
Highest salary reported.....	4,320	1,440	2,400	1,440	720	0.40
Average salary.....	3,048	870	1,753	1,046	593	0.33

TABLE 11
SALARIES OF CHINESE COLLEGE-LIBRARY PERSONNEL

Class B	Librarian	Assistant Librarian	Division Chief	Senior Assistant	Junior Assistant	Student Assistant
Number of libraries reporting...	8	2	4	8	8	3
Lowest salary reported.....	\$1,200	\$ 660	\$ 480	\$ 360	\$240	\$0.20 per hour
Highest salary reported.....	3,600	1,920	1,800	1,500	720	0.23
Average salary.....	2,445	1,290	1,050	762	442	0.21

TABLE 12
SALARIES OF CHINESE COLLEGE-LIBRARY PERSONNEL

Class C	Librarian	Assistant Librarian	Division Chief	Senior Assistant	Junior Assistant	Student Assistant
Number of libraries reporting...	5	2	4	4	4	2
Lowest salary reported.....	\$ 900	\$ 900	\$ 480	\$ 360	\$360	\$0.10 per hour
Highest salary reported.....	1,680	960	960	960	540	0.15
Average salary.....	1,248	930	660	600	450	0.125

the national universities. The next best salaries are to be found in the provincial universities. The salaries offered by the private institutions are generally poor, except at Nankai, where salary scales are much higher than those of other institutions of the

same character. Among the missionary institutions, except in a few cases, there is a wide difference between the salary of the librarian and the salaries of the other members of the same staff. With the exception of the University of Nanking and Yenching, the general salary scales of missionary institutions are not comparable with those of the national and provincial universities. Table 13 shows a comparison of the different salary scales.

In 53.8 per cent of the libraries reporting there is no definite basis on which the salaries of the library staff are established. In 30.7 per cent it is reported that education and experience are the factors considered in making salary decisions. The University of Chekiang and Chi-Nan report that there are definite

TABLE 13
COMPARISON OF SALARY SCALES OF CHINESE COLLEGE
LIBRARIANS

Group	Number of Libraries Reporting	Lowest Salary	Highest Salary	Average Salary
National.....	7	\$1,920	\$4,320	\$3,017
Provincial.....	2	1,680	3,600	2,640
Private.....	4	1,200	2,880	1,830
Missionary.....	10	840	4,200	2,256

regulations, while Peiping Normal reports that the president decides. The University of Shanghai reports that it is "at first . . . judgment of the librarian."

All the libraries report that the salaries of the library staff are paid on a twelve-month basis. Room, but not board, for the members of the library staff is supplied free by thirteen of the libraries reporting. Yenching also adds that houses are supplied free to members above a lecturer's rank. Kwang Hua and Hangchow Christian College are the only institutions that supply both room and board free to the members of the staff.

Working conditions.—There is great variation in the number of hours and the hours during which the library is open on weekdays, Sundays, and holidays. Of the twenty-six libraries reporting 84.6 per cent open on weekdays at eight o'clock in the

morning, and 38.4 per cent remain open until ten in the evening, with intervals of intermission. Only eight of the libraries reporting are open all day with no intermissions. Yenching keeps open from eight o'clock in the morning until ten in the evening, with an hour's intermission between twelve and one.

With the exception of Fukien Christian University and Lingnan, which have the noon intermission hour set between one and two o'clock in the afternoon, and the eight others mentioned above which keep open all day without intermission, all the libraries report that there is an hour intermission, obviously for lunch, between twelve and one, and a longer intermission for supper, or one lasting from four o'clock in the afternoon until eight in the evening. On Saturdays there are shorter hours in most of the libraries reporting; some close in the afternoons and some close in the evenings. The maximum number of hours during which the library is open each day on weekdays is fourteen, and the minimum is eight, averaging a little over eleven hours a day.

On Sundays and during holidays there is also a shorter schedule, and practices vary among the libraries. A few libraries keep open all day Sunday; others, only afternoons and evenings; and still others, only evenings. Wu-Han University, Honan University, and Catholic University report "open only in the morning"; the University of Chekiang, University of Peking, Nankai, and Cheeloo report "open in the afternoon only"; Central China University and West China Union University report "closed." Seventeen libraries, however, are open on Sunday evenings.

During holidays 26.9 per cent of the libraries reporting state that the library is closed; 19.2 per cent report "open in the evening"; 7.6 per cent report "open three times a day—morning, afternoon, and evening." Catholic University reports "open in the morning"; the University of Chekiang, University of Peking, Nankai, and Cheeloo report "open in the afternoon"; West China Union University reports "open in the morning and afternoon"; while Sun Yatsen University, Lingnan, University of Shanghai, and Yenching report "open in the afternoon and

evening." St. John's reports "holidays during the terms are considered the same as ordinary days in opening hours." Tsing Hua reports "the hours are not fixed." Holidays longer than one day are treated differently from single-day holidays in 26.9 per cent of the libraries reporting. Honan University and Hang-chow Christian College report "open as usual"; Chiao-tung, Nankai, and University of Nanking report "open in the morning and afternoon"; Soochow University reports "open in the morning"; and University of Shanghai reports "closed."

Hours of work.—The hours of service per week required of the staff vary from thirty-three to fifty-four hours with a majority of libraries prescribing forty-eight and under. The minimum

TABLE 14
HOURS OF WORK REQUIRED OF LIBRARY STAFF

Group	Number of Libraries Reporting	Minimum	Maximum	Average
Class A.....	10	33	48	41.7
Class B.....	10	40 $\frac{1}{2}$	54	46.6
Class C.....	6	39	48	43.8

and the maximum number of hours of work required each week in the libraries reporting, and the average number of hours in each of the three classes of libraries, are given in Table 14.

Sunday and holiday work.—Out of twenty-six libraries 57.6 per cent indicate that the work on Sundays and holidays is performed by the regular staff members in rotation. Tsing Hua reports that the clerical staff and the student assistants do this work with staff supervision. The University of Peking and Cheeloo report "work being done by junior assistants as regular duty." Yenching reports work being done by members of the regular staff with the help of student assistants. The University of Shanghai reports that the work is done by "assistants with student pay." The University of Nanking reports "by Sunday staff who have Mondays free." Three libraries report that the work is performed by the circulation department staff.

All of the libraries except five report that the members of staff rotate their schedules. Of these 34.6 per cent report rotation in circulation work; 19.2 per cent in evening work; 7.6 per cent in the supervision of reading-rooms; 3.8 per cent in the filing of catalog cards; while 15.3 per cent report the practice in all branches of service including circulation, reading-room, periodical room, reference room, reserve books, evening work, and shelving. Central China University reports that every member of staff is trained to do every kind of work.

Evening work in the departments which remain open in the evenings is done by the regular staff in 53.8 per cent of the libraries. Two of the libraries have separate evening staffs. In 26.9 per cent of the libraries evening work is done by members of the circulation department. Tsing Hua reports that evening work is done by the staff of the circulation department and the student assistants in turn. At Lingnan the work is done by experienced student assistants. Sun Yatsen University and Catholic University report that evening work is done by the reading-room staff.

Overtime and lost time.—Over half of the libraries do not make use of any kind of schedule, time sheet, or other form of individual time records. Of the others 23 per cent report the use of efficiency records or duty schedules; another 23 per cent make use of time sheets or attendance records. Regarding compensation for overtime work and the making-up of lost time, 53.8 per cent of the libraries report that there are no defined rules. In 19.2 per cent overtime work is compensated, and 15.3 per cent of the libraries require that lost time be made up during vacations.

Tsing Hua reports that overtime work is compensated for by a special increase in salary. At the University of Shanghai overtime work is paid for at the rate of twenty cents an hour. West China Union University compensates overwork by granting extra pay. At Fukien Christian University and Lingnan overtime work is compensated for by allowing the members to take off time during the day's work. Yenching reports that extra work is usually taken care of by temporarily increasing the

staff. Wu-Han University reports that "overtime work on one's own initiative is not compensated." The University of Chekiang reports "guided by the general regulations of the university." The University of Peking, Sun Yatsen University, Cheeloo, and St. John's report "no overtime work required." St. John's further adds that lost time through special leaves of absence granted is not made up.

Vacations.—A legal annual vacation with pay varying from two weeks to eight weeks is given to the staff in most of the libraries reporting. The University of Peking reports "during

TABLE 15
LENGTH OF VACATION ALLOWED THE LIBRARY STAFF

Vacation	Number of Libraries Reporting	Percentage Represented
From six to eight weeks.....	4	15.3
Five weeks.....	1	3.8
One month.....	12	46.1
Three weeks.....	1	3.8
Two weeks.....	3	11.5
Half-day work during vacations.....	1	3.8
None.....	4	15.3
Total.....	26	100.0

winter and summer vacations, half-day work." Table 15 shows the statistics available.

No difference is made in the vacation periods of the different grades of the staff in 88.4 per cent of the libraries reporting. Tsing Hua reports "no difference made for full-time members." The University of Shanghai states that the associate librarian may have two months' vacation. St. John's reports that there is no difference made except that the librarian does not have a scheduled time in the summer and winter duties, but he is usually the last one on the staff to have a vacation and the first one to come back when a new session of the university begins.

Leaves of absence and sick-leaves.—Leaves of absence are

granted with pay, in addition to the regular vacation, in 34.6 per cent of the libraries reporting. No leave of absence with pay is granted in 15.3 per cent of the libraries. In 34.6 per cent only short leaves, varying from three days to two weeks, are granted with pay. Three libraries report that substitutes must be provided for leaves of absence exceeding the limit of one week. At Nankai leaves of absence granted in addition to regular vacation have to be made up. Tsing Hua allows one month with pay in addition to regular vacation for leaves of absence at appropriate times. The University of Amoy and University of Nanking grant with pay leaves of absence not exceeding one month. Yenching reports "it depends on the nature of absence."

In 42.3 per cent of the libraries there are no definite regulations regarding sick-leaves; 19.2 per cent require that substitutes be provided in the case of sick-leaves, and 7.6 per cent report that they are granted with pay. Chiao-tung and Tsing Hua report that sick-leaves over three days have to be approved by the president. Honan University reports that leaves of three days and under are granted by the librarian; those over one week, by the president. Yenching reports "no definite regulations, at the discretion of the librarian." Central China University reports that long sick-leaves are granted on presentation of a letter from a certified doctor. Four libraries grant one month for sick-leaves.

Staff privileges and welfare.—A study of the replies to the questionnaires has revealed the fact that even among the leading college and university libraries in the country there are no officially established and enforced regulations concerning matters vital to the material well-being of the staff. The growth of the library as an active agency in the community is a comparatively recent movement in China, and library work as a profession is yet one of the newest callings. Consequently, there is not yet time to think of and plan for the material welfare of the personnel involved in the administration and organization of libraries.

Special privileges.—With the exception of a few libraries where the librarian is entitled to shorter working hours and a

longer vacation, 57.6 per cent of the libraries report that the librarian has no special privileges. Three libraries report that the librarian enjoys a longer vacation; four libraries report that the librarian has shorter working hours, while four others report that the special privileges of the librarian are not fixed. Hang-chow Christian College reports "none except house for the family." Besides a longer vacation, the librarian at Central China University also has the privilege of going abroad for library surveys.

As to the special library privileges of the other members of the staff, 80.7 per cent of the libraries reporting say there are none. Three libraries report that the staff members have more liberal borrowing privileges. Nankai and Hangchow Christian College report respectively that there are no limits to special privileges and that such privileges are left to the assistant's own discretion.

Library conferences.—Of the twenty-six libraries reporting, 69.2 per cent indicate that there is no provision made regarding the expenses of the librarian or other staff members in attending library conferences. In 30.7 per cent the expenses are met either by the university or by the library. Chiao-tung reports that the librarian receives a gratuity of five dollars per day for the purpose. Chi-Nan reports "expenses paid by the university in accordance with circumstances." Peiping Normal states that the university pays transportation for library conferences held at distant places and that an allowance for two delegates is made. The University of Peking allows "traveling expenses for the librarian only." Sun Yatsen University says "the university gives reasonable allowance." Central China University reports "traveling expenses will be given to the librarian or any other member of the staff if he is appointed as library representative."

Staff meetings.—In 34.6 per cent of the libraries meetings of the entire staff are held once a month; in 26.9 per cent there are no meetings of any kind. In other libraries 15.3 per cent report that there are no fixed dates for these meetings, but they are called when occasion demands; in 23 per cent meetings are held at various times, varying from once a week to twice a month,

once, twice, three or four times each semester. Most of the libraries reporting agree on the purpose of these staff meetings, that is, to report on the work of the different departments and to discuss library problems. Yenching reports that staff meetings are irregular; their purpose is to promote the mutual understanding of the members, to report on the progress of work, and to announce new projects. The University of Shanghai reports that meetings are held when needed "to correct some difficulty." St. John's states that there are no scheduled meetings, but as the staff is small, members freely discuss any library problem among themselves.

Staff reading.—Sixteen libraries report that there is no provision made in the library budget for a collection of books in library science for staff reading. In 23 per cent of the libraries the librarian purchases all books suitable for staff reading from the general library book fund. Wu-Han University allows \$400 a month in its budget for a collection of books for staff reading, which is an exorbitantly big sum for such a purpose in a Chinese college library. Three libraries report that some provision is made for the purpose, but very little.

Out of twenty-six libraries, twenty-one report that no reading course or study is required of the staff, and that members of the staff select their reading matter at will. The University of Peking requires the staff to read library literature and languages. Catholic University requires professional literature. Fukien Christian University reports that the librarian assigns reading material to the staff. At the University of Nanking and St. John's no definite assignments for reading are made to the members of the staff, but the librarian frequently calls their attention to good material appearing in print to which they may turn at their leisure. St. John's also provides a working collection of essential literature on library administration for the use of the staff.

Advanced study.—Thirteen libraries report that there are no regulations regarding opportunities given to staff members for advanced study. In seven libraries each member of the library staff may register for a two- or three-credit course in the uni-

versity. Hangchow Christian College allows each member of the library staff to register for a college course, but not for credit. Central China University reports that division chiefs in the Boone library have the opportunity of going abroad for advanced study by virtue of their teaching positions on the faculty of the Boone Library School. Fukien Christian University gives the librarian a traveling allowance to visit other libraries at the end of every six years' service. Yenching reports that the librarian is entitled to a sabbatical leave of one semester, or a whole session, after six years' continuous service either for study or for research. At the University of Nanking there is also a seven-year sabbatical ruling for advanced study, but there are no defined regulations. The librarian at St. John's, having attained the rank of professor according to his salary, is entitled to a sabbatical leave either for advanced study or for library visits for one year on half pay or for half a year on full pay, but this more or less depends on the financial condition of the university. West China Union University gives "encouragement" for advanced study of staff.

Staff insurance, retiring funds, etc.—In 80.7 per cent of the libraries reporting no physical examination of employees is required, either at the time of employment or at other regular intervals. At Fukien Christian University physical examinations are required of employees at the time of employment. Central China University and West China Union University require such examination "once a semester" and "once a year," respectively. Yenching reports that physical examinations are required both at the time of employment and at regular intervals. Lingnan reports that physical examinations are required by the university, but the regulation has not been strictly observed.

In 80.7 per cent of the libraries there is no provision made regarding staff insurance or retiring funds, etc. Tsing Hua and Lingnan provide a retirement plan for all the staff members of the university, including the library staff. Yenching reports the existence of a retirement annuity plan, applicable to all members of the university administrative staff. The University of Shanghai has a group insurance plan for all members of the uni-

versity staff. Wu-Han University reports that in the case of a member of the library staff's suffering untimely death within five years of active service, the deceased's estate is entitled to one-fifth of his last year's salary; over ten years, one-fourth of his last year's salary; over fifteen years, half of his last year's salary.

CONCLUSIONS AND RECOMMENDATIONS

1. From this analytical study it is found that even among the leading colleges and universities in China there is a serious lack of definite standards in regard to problems of library personnel. There are some institutions that are singularly outstanding and are exceptions to this general condition, but there is a considerable number of others that fall far below the desired standard of attainment.
2. No relation is found to exist between the size of staff in a library and the amount of work done. The library that has the largest staff does not have the highest annual increase of books or the largest annual circulation. There is also no general uniformity as to the ratio that the library budget bears to the college budget as a whole.
3. In the appointments of the library staff the practices are fairly well established. Promotion in rank and increase of salary after the appointments are made are, however, practices calling for standardization. Advance in position and in salary at present seem to depend more on the financial condition of the institution which the library serves than on the record of service rendered.
4. The general and professional educational qualifications of Chinese college librarians are fairly high, and their duties generally well defined. But in matters of academic status and faculty ranking the Chinese college librarian suffers considerably from the fact that he may be open to adverse criticism but has no opportunity to express his opinions and to defend his position.
5. There is great variation in the salary scales of the library staff in institutions of different character. The best salary scales

are to be found in the government-supported institutions. The salary scales of private institutions are generally poor. The missionary institutions pay better, but they are still not comparable with government institutions.

6. The working conditions of the staff vary with different libraries. The hours of service per week, the length of vacation, and other questions show the lack of uniform standards. Furthermore, there are no officially established and enforced regulations concerning matters vital to the professional advancement, the cultural enlightenment, and the material well-being of the staff.

The specific conclusions to be drawn from the findings of this investigation are set down here in the form of certain recommendations to illustrate the immediate needs of Chinese college libraries in general:

a) In realization of the importance of library standards, the immediate need of Chinese college libraries is for certain definite minimum standards, especially in matters of library personnel, to be used by university administrators in filling vacancies in library positions and also for the guidance of library workers seeking positions in the college-library field. It is recommended that the Library Association of China undertake to make, under the direction of a specific committee, various studies on the basis of which such standards governing a college library may be evolved.

b) There will be a great need for a clear definition of the authority of the college librarian in the statutes of the institutions served. This is important in order that the college librarian may fully carry out the objectives of the library as a functional unit. It is recommended that the college librarians now connected with the leading institutions work individually toward attaining this great end. Not until his authority is clearly defined will the Chinese college librarian be safeguarded in matters of academic status and executive freedom.

THE CONTRIBUTORS TO THIS ISSUE

RANDOLPH G. ADAMS, director of the William L. Clements Library at the University of Michigan, was born in Philadelphia in 1892. He received his Bachelor's degree from the University of Pennsylvania in 1915 and his Doctor's degree from the same institution in 1920. He was assistant professor in history at the University of Pennsylvania, 1915-16; fellow in history, University of Chicago, 1916-17; and Carnegie fellow in international law at the University of Pennsylvania, 1919-20. From 1917 to 1919 he served in the United States Army.

Before coming to his present position at the Clements Library in 1923, Dr. Adams spent three years as assistant professor of American history at Trinity College (now Duke University).

In addition to many contributions to literary and historical periodicals, Dr. Adams is the editor of *Selected political essays of James Wilson* (1930) and author of *Political ideas of the American Revolution* (1922), *A history of the foreign policy of the United States* (1924), *The passports printed by Benjamin Franklin at his Passy Press* (1925), *The gateway to American history* (1927), *British Headquarters maps and sketches used by Sir Henry Clinton 1775-1782* (1928), and *Pilgrims, Indians and patriots* (1928).

CHARLES F. DALZIEL, instructor in electrical engineering at the University of California at Berkeley, was born in San Francisco in 1904. He obtained a B.S. degree in mechanics from the University of California in 1927, was associated with the General Electric Company, Schenectady, New York, as student engineer, 1927-29, and with the San Diego Consolidated Gas and Electric Company from 1929 to 1932. Since his appointment at Berkeley in 1932 he has taken the degrees of M.S. in 1934 and E.E. in 1936. His attention was attracted to the problem of the proper selection of periodicals for electrical engineers in the course of his service on the departmental library committee in 1935. Mr. Dalziel has been a frequent contributor to professional journals in his field.

HARRY MILLER LYDENBERG, director of the New York Public Library, was born at Dayton, Ohio, in 1874, and graduated from Harvard University in 1897. His long association with the New York Public Library began in 1896, where he has been successful cataloger,

head of the manuscript department and assistant to the director of the Lenox Branch, chief reference librarian, and assistant director of the central library before his appointment as director in 1934. He was president of the New York Library Club, 1917-18, of the Bibliographical Society of America, 1929-31, and of the American Library Association, 1932-33.

In addition to his periodical articles, Mr. Lydenberg is the editor of *Archibald Robertson, Lieutenant-General Royal Engineers, his diaries and sketches in America, 1762-1780* (1930), the translator of André Blum's *On the origin of paper* (1934), and the author of *John Shaw Billings* (1924), *Paper or sawdust—a plea for good paper for good books* (1924), and *The care and repair of books* (with John Archer, 1931).

JOHN J. LUND was born October 17, 1906, in Nørrebroby, Denmark. By training he is a philologist as well as a librarian. His undergraduate work in classical languages was done at the University of California at Berkeley (A.B., 1928). He was appointed to a fellowship at the University of Chicago to work in the field of comparative philology in 1930. Chicago conferred a Ph.D. degree upon him in 1932. He returned to Berkeley for his library training and received a Certificate from the University of California, School of Librarianship, in 1936.

Since 1936 Dr. Lund has been a member of the order department of the library staff and since January, 1937 also instructor in Scandinavian languages at the University of California at Los Angeles.

HAROLD H. PUNKE was born and reared in a village in central Illinois. At the University of Illinois he received the Bachelor's and Master's degrees in the field of agriculture in 1924 and 1925, respectively. He then studied education, and the Doctor's degree in that field was conferred in 1928 by the University of Chicago. From 1928 to 1930 Dr. Punke studied at the University of Hamburg and traveled in different European countries. He was on the faculty of the University of Illinois from 1930 to 1932, was a social case worker in Chicago, 1932-33, and since 1933 has been professor of education at the Georgia State Womans College at Valdosta, Georgia.

Dr. Punke is the author of *The courts and public-school property* (1936). He is a frequent contributor to sociological and educational periodicals.

MORTIMER TAUBE was born in Jersey City, New Jersey, December 6, 1910. He attended Rutgers University and the University of

Chicago, receiving a Ph.B. degree from the latter institution in 1931. The following year Dr. Taube went to Harvard University for post-graduate work in philosophy—work which he completed at the University of California (Ph.D., 1935). In 1936 he received a Certificate from the University of California, School of Librarianship. From 1932 to 1935 Dr. Taube held the position of teaching assistant in philosophy at the University of California. At present he is head of the circulation department of the Mills College Library, Mills College, California.

Dr. Taube is the author of *Causation, freedom and determinism* (1930), and of an article, "Positivism, science and history," which appeared in the *Journal of philosophy*, April 15, 1937.

JAMES WESTFALL THOMPSON was born in Pella, Iowa, in 1869. He was educated at Rutgers University (A.B., 1892) and at the University of Chicago (Ph.D., 1895), and has done research in Paris and other foreign archives. From 1895 to 1932 he was a member of the history faculty at the University of Chicago, teaching European and medieval history. He left Chicago in 1932 to become Sidney Hellman Ehrman professor of European history at the University of California.

Dr. Thompson has written numerous periodical articles and is the author of the following books: *The wars of religion in France, 1559-1576; the Huguenots, Catherine de Medici and Philip II* (1909), *The Frankfurt Book Fair* (1911), *The last pagan* (1916), *The lost oracles; a masque* (1921), *Feudal Germany* (1928), *Economic and social history of the Middle Ages* (1929), *Economic and social history of Europe in the later Middle Ages* (1931), *The Middle Ages* (2 vols., 1931), *The living past* (1931), and *Byways in bookland* (1935).

For his outstanding work as a historian Rutgers University awarded him a Litt.D. degree in 1922.

EDWIN ELLIOTT WILLOUGHBY: for biographical information see the *Library quarterly*, IV (1934), 496 and V (1935), 468. A recent article of his, "Who saved Shakespeare?" appears in the April, 1937, issue of *Coronet*.

VI-LIEN WONG, librarian, St. John's University, Shanghai, graduated from that university in 1919 and began his association with the library as an assistant in 1920. He was appointed assistant librarian in 1921, acting librarian in 1926, and librarian in 1930. He was also head of the cataloging department of the National Central University Library at Nanking, 1927-28. Awarded a fellowship under the Rocke-

feller Foundation in 1934, Mr. Wong studied at the School of Library Service, Columbia University, where he received the degrees of B.S. and M.S. in library science. He resumed his work at St. John's University in the fall of 1936.

THE COVER DESIGN

RICHARD BRADOCK was born about 1553. He was apprenticed to John Fylkyn, a minor stationer of London, and on the death of his master on or before 1574 he served out the remainder of his time with Henry Middleton, an important London printer. He was made a freeman of the Stationers' Company on October 14, 1577, and became a bookseller. In 1587, however, his former master died, and his widow, Jane Middleton, sold his three presses and a large amount of printing equipment, together with the copyrights of a number of books, to Robert Robinson for the large sum of £200. In 1597 Robinson died, and his widow promptly married Bradock, who began printing in 1598.

Bradock was primarily a "trade printer." With a large shop in Aldermansbury, somewhat removed from the center of the book trade, he evidently preferred to specialize in printing, leaving to others the selling of books. His productions were chiefly the works of Puritan ministers, but he also specialized to some extent in the printing of school books and of commercial forms. He printed, however, Marlowe's *Edward II*, Peacham's *Art of Drawing*, Vaughan's *Naturall and artificial Directions for Health*—a work intended for Newfoundland settlers and a great favorite among the early American colonists—Stowe's *Summarie of the Chronicles of England*, Fulwood's *Enemie of Idleness, showing how to endite Epistles*, and Belleforest's *Hystorie of Hamblet*. Though no example of any edition issued by Bradock appears to have survived, a manual of divination by means of dice, *The Book of Fortune*, was probably a profitable copyright.

Almost simultaneously with his entrance into the printing trade, Bradock, on July 1, 1598, was elevated to the Livery of the Stationers' Company. He became involved rather frequently in disputes with other members of the Company. In 1609 he retired from business, selling his establishment to Thomas Haviland and William Hall, but he was still living in 1615.

Bradock's mark, reproduced on the cover, shows an eagle bearing

in its talons an eaglet and compelling it, as a test of its fitness to be reared, to gaze upon the sun (cf. Pliny *Nat. Hist.* 10. 3; 29. 6), with the motto, *Sic crede*—"So believe." This device—together with his press and wife—Bradock inherited from Robinson.

EDWIN ELIOTT WILLOUGHBY

FOLGER SHAKESPEARE LIBRARY

THE EARLIEST RECORDED LIBRARY REGULATION

Excavations in the Athenian market place, now being conducted by the American School of Classical Studies at Athens, have recently brought to light the existence of a library there about which nothing had been known hitherto. This seems to have been erected about the time of the reign of Trajan (A.D. 98–117), but never, of course, rivaled the famous institution founded by his successor Hadrian (A.D. 117–38), considerable remains of which, showing yet the niches in the wall in which the bookcases had originally stood, are still a conspicuous feature in the modern city of Athens. Of especial interest is an announcement, presumably from the librarian himself, which comes from the earlier building, and represents what is, I believe, the oldest library regulation still extant. It is a short, and somewhat less than perfectly spelled, notice, which has just been published in *Hesperia*, V (1936), 41–42, and runs as follows: "No book shall be taken out, since we have sworn an oath to that effect. It will be open from the first hour until the sixth [i.e., sunrise to noon]."

One may surmise that the librarian had been annoyed by people who misused the privilege of taking books out, and, since such a regulation is notoriously difficult to enforce strictly, was trying to protect himself from special requests for the extension of a favor by giving public notice that, since a solemn oath had been taken to observe the rule, henceforth it would be impossible for the librarian to make any exceptions, however much he might want to do so himself. One can hardly refrain from expressing the hope that the little ruse of the long-suffering public ministrant was successful.

As for the two phonetic spellings, the charitably inclined may readily enough charge them to the incompetence of a poorly trained stenographer or to the wilfulness of a stonecutter who did not conscientiously follow his copy.

WILLIAM A. OLDFATHER

University of Illinois

REVIEWS

Book selection: its principles and practice. By JAMES HOWARD WELLARD. London: Grafton & Co., 1937. Pp. xxiv+205. 10s. 6d.

This book is not quite all that the title-page would lead one to expect. It is not a treatise on the principles and practice of book selection but, as the first paragraph of the Introduction makes clear, a study undertaken to formulate and elucidate a social theory of that process which James Duff Stewart in his Preface rightly calls "the most important part of the librarian's task." The author is a young English librarian, recently a fellow in residence at the Graduate Library School of the University of Chicago, and known to readers of library periodicals as an original thinker and engaging writer on questions concerning the place and functions of the public library, present and future. He is one of the group to whom Dean Wilson referred, in his address on "The next fifty years," as the "inquiring juniors" whose quest for a philosophy of librarianship will not be denied, and whose researches are bound to influence the future of the public library as a social force as well as their own as its coming administrators. This is all to the good, and their labors will be followed with eager interest.

The course for such explorations has been ably charted in Professor Pierce Butler's *Introduction to library science*, the first manifesto of the scientific spirit in librarianship, and the present book holds well to that course. Part I opens with a text from Butler's prolegomena postulating "an understanding of its historic origins" as indispensable for the full apprehension of our craft. The historic origins are studied accordingly, with the intent to discover the objectives, if any, in the minds of the early proponents of the public library. This study covers familiar ground and leads to nothing new, either in fact or in philosophy. And here the first of several unbidden doubts rears its head. To set out, once again, the speculations of a number of well-meaning but largely impractical persons, from Samuel Smiles and his associates before the Parliamentary Committee in 1849 to George Ticknor handing down the tablets of the law in Boston in 1855, and thence from Josiah Quincy to Andrew Carnegie, seems slightly less than relevant to what the public library is trying to do, or should do, in the twentieth and succeeding centuries. And particularly since the result of the quest in the form of deducible conclusions appears to be that, at various stages of its career or by various commentators, the institution was conceived of as being either reformative or educational, recreational or democratic, and sometimes all four together. Frankly, we look to our "inquiring juniors" for more vital stuff than this on which to build their philosophy. The

American public library acknowledges but a very small debt to its historic origins and is rapidly scrapping such vestiges of the past as still survive after the fiery ordeals of the war and the depression. It now awaits new leadership, looking forward—not back—toward a future with new social concepts and responsibilities and vast new opportunities.

Part II, of the three parts into which the book is about equally divided, proceeds to combine and reconcile the objectives thus determined into a basis for a theory of book selection with special reference to the contribution of related fields of knowledge. A sound and useful distinction is made between the educational and the recreational objectives, which are recognized as fundamental—as they certainly are—and the reformative and the democratic, called "incidental"—a convenient label if one is needed. There follows a readable discussion in the course of which such familiar facts are noted as that the right to recreation through books is a collective one and must be measured in terms of the common good; and that the public library, lacking the organization necessary to the service of formal education, must content itself with a service of "reference and information"—an amazingly inadequate characterization of the immense and increasing uses made of nonfiction in and by the modern public library. These two branches of service—the two described above as fundamental—are then redefined as the services of "utility and humanity"—all of which is far from new and, in fact, sounds suspiciously like a paraphrase of the old patter about the "best books for the largest number at the least cost."

Book selection "proper" is approached from three sides or bases—the literary, in which the canons of criticism are briefly considered, and the socio-psychological, which constitute the new approach and form the principal subject matter of Mr. Wellard's thesis. There is also a fine chapter on the "Administrative bases," which deals in a direct and lucid manner with the standards, both literary and human, plus the numerous influences and side lines, that confront the practical library book selector. The administrative function of book selection, which we guess, perhaps mistakenly, means "practical" book selection, is described as relating to the "social objectives of the public library, objectives which are not found to be implicit in the history of the institution itself, nor in an examination of the book and reader." In other words, here is a definition of book selection standing alone and on its own basis as a high library skill, unclouded by historic origins on one side or by socio-psychological theories on the other. This chapter will repay careful reading.

The study of readers and potential readers of library books to discover their propensities and reactions, sociologically by surveys and psychologically by tests and questionnaires, has now been carried on for some years, and, while obviously still in the experimental stage, has produced a considerable literature which is accessible to all interested in library trends and is known, if not familiar, to many. Mr. Wellard leans heavily upon these techniques, as they have been developed at the Graduate Library School, for the development of

his theory of book selection, which occupies the remainder of this volume. This reviewer must, however, plead the limitations of scope and space—as well as those of his own incompetence—in foregoing an attempt to evaluate them, and, hence, the theory built upon them. On the whole, it seems too early to estimate the validity of a theory which, in the author's own words, "can only be put to the test if librarians . . . anticipate a body of common data to be contributed to, or drawn upon, in a spirit of scientific collaboration." That time is not yet, and we may safely reserve our judgment with an open and thoroughly receptive mind, pending further experiment and a clearer conspectus of achievement.

Meanwhile every librarian will welcome this new approach to his problems—even though the conclusions reached to date seem to do no more than confirm and coincide with those evolved out of his own empirical methods. Mr. Wellard's presentation is clear, concise, and cogent. It is also well documented, although we miss from both Index and Bibliography the name of John Cotton Dana, whose advanced thought and pungent pronouncements concerning the administration of books to people come nearer to the modern trend than most. But not all will be able to follow the argument except at a long distance, and some will continue to entertain doubts as to whether these scientific procedures will prove as efficacious in performance as they seem in promise; whether the reading public is really as inert and inarticulate a body of laboratory material as our "inquiring juniors" assume; and whether book selection, which deals with such incorporeal entities as the manifestations and aspirations of the human spirit, is not, after all, more of an art than a science.

C. B. RODEN

Chicago Public Library

Library trends. Papers presented before the Library Institute at the University of Chicago, August 3-15, 1936. Edited with an Introduction by Louis R. WILSON. Chicago: University of Chicago Press, 1937. Pp. xvi+388. \$2.00.

In the instruction to its reviewers given by the *New York Nation*, they are directed to treat the book under consideration under three heads—its contents, its style or manner, and its value. I shall attempt to follow this excellent plan.

Since, in this instance, the book is a collection of some twenty papers read before a library institute, its contents must be summarized rather than given in detail. We have here a collection of excellent summaries of modern library problems with special emphasis on what we may expect to happen in the future. The papers may be roughly divided into the following groups:

1. Recent social trends
2. Regional service—The rural districts, Plan regions, Metropolitan areas

3. The library as an educator—Adult education, College programs
4. Research; Union catalogs
5. Reading and readability
6. Evaluation
7. The library school curriculum

As may be seen by the foregoing summary, the papers are written from both the administrative and instructional standpoints and embrace trends not only in the public library but in the general research library, the college library, and the library school. They emphasize, more particularly, the instructional viewpoint, and many of them are by university teachers.

Professor William F. Ogburn, of the University of Chicago, believes that the future of library work has not been sufficiently considered by librarians. He quotes H. G. Wells, whom he considers as "an authority on the future," to the effect that universities should endow chairs of foresight or professorships of the future. This whole collection of papers may perhaps be considered as a preliminary step toward this end, which he thinks has been neglected by universities. The first trend to which we shall have to adjust ourselves is the obvious increase in the volume of knowledge. This will be done, and is being done, by specialization, by what he calls "the prolongation of education," the growth of high schools, possibly the growth of leisure time, and adult education.

The second trend Dr. Ogburn calls attention to is the growth of mechanical inventions, one of which, as they affect libraries, is microphotography, and another is the sound record on film such as is used in the talking movies.

Much of this interesting collection must necessarily be passed over in a brief review, but a group of three papers deserves special mention: "Progress in the study of readability," by Professor William S. Gray, of the University of Chicago; "People versus print," by Professor Douglas Waples, of the Graduate Library School, University of Chicago; and "The study of adolescent reading by the Progressive Education Association," by Ralph W. Tyler, of the Bureau of Educational Research, Ohio State University.

Professor Gray bids us note that the study of readability was first emphasized by librarians, who have recognized the fact that if a book is to be read it must be fit for reading. In 1926 James Harvey Robinson, in *The humanizing of knowledge*, pointed out the fact that "the best books are simply too long and too hard for even ambitious and intelligent readers." Both librarians and teachers have been fostering what may ultimately become a general re-writing of the material of our classics. This, which is even now in progress, is perhaps more notable in history and biography than elsewhere. It is also seen in popular science, where it has not met with quite so much success, owing to the fact that the re-writing tends to be either too popular or too scientific. Our perfect popular science still largely remains to be written.

In his paper on "People versus print," Dr. Waples notes that the guns of

the propagandist are loaded with printer's type, and the notion, he says, that "reading is good" is a quaint one dating from the age of scholasticism. He believes that most of us read what is easiest to get, easiest to understand, and of greatest personal interest to us; our reading being thus determined by accessibility, readability, and subject-interest, in this order. Among the sources, as he enumerates them in order, the public library comes only fourth, being preceded by the newsstand, the magazine stand, and the libraries of friends.

Mr. Tyler describes the interesting eight-year study of the Commission on the Relation of School and College formed by the Progressive Education Association. In this study student reading has been considered of primary importance, and a special committee has formulated as objectives no less than ten values, such as mastery of skill in reading, familiarity with the various forms of literature, disposition to read for fun, effective use of reference books, use of reading in developing emotional stability, etc. The paper shows what tests are being used to obtain data on these particular subjects and traces the development of a practicable procedure for getting a record of the actual reading done by each pupil.

Certain interesting facts have already been presented, and Mr. Tyler emphasizes their significance to librarians. They are, first, the small relationship between the quality of reading and maturity and, second, the small relationship between the number and maturity of books and magazines read. These generalizations, however, refer to the reading of individuals, in contrast to which the reading of social groups generally shows high correlation between quality of book-reading and magazine-reading. Mr. Tyler points out that these results indicate that indiscriminate encouragement of reading may retard development as well as facilitate it. The necessity for discrimination in reading was never brought out more clearly.

In a book consisting of essays by twenty different authors, it is hardly possible to characterize the style in general, but it has been, of course, controlled largely by the circumstances under which these articles were delivered, namely, as parts of a didactic exercise. Taken together, they make an eminently readable book, which may be summarized as a résumé of present-day problems and practice in all phases of adult education that touch the work of libraries in any way. There is something here for every librarian and, in particular, for every staff member of a large library. The book contains excellent material for discussion clubs, such as are now being formed so freely by junior librarians. These will find that they can use not only the actual papers but also the suggested reading lists which accompany them.

ARTHUR E. BOSTWICK

St. Louis Public Library

A system of bibliographic classification. By HENRY EVELYN BLISS. 2d ed. rev. New York: H. W. Wilson, 1936. Pp. xii+343 (reproduced by photo-offset). \$6.00 (first edition may be exchanged for the new edition for \$3.00).

It is interesting to see a work come out on such an experimental basis as this one. The author first published his two volumes on the principles of classification, followed by his system of bibliographic classification. The two parts of this new work give, in turn, principles and their exemplification. The first edition was reviewed in a number of library periodicals both in this country and in England. The author, pursuing his usual policy, continued to revise and improve his classification schedules. Following the constructive suggestions of Mr. James Ormerod, writing in the *Librarian*, and Mr. Lawrence A. Burgess, in the *Library Association record*, he has revised one entire class and has given us a second edition within a year of the publication of the first edition.

The Preface to the second edition indicates clearly the changes made. The important ones are: an added "auxiliary systematic schedule," Schedule 10, and a rather complete revision of Class P: Religion, Theology, and Ethics. The less significant changes will be found in the schedules for Physics; Astronomy, Geology, etc.; Zoölogy; and Anthropology. These changes are made in Part I, which deals with principles, Part II, the schedules and tables, and Part III, the Index to the classification.

The author, in the following quotation from the Preface, states succinctly the major change in this edition.

Our first edition divided Class P, Religion, Theology and Ethics, into three interwoven sub-classes: first, the general and comparative studies, second, the historical and descriptive in detail, and third, the "practical" religion, treated generally and comparatively. Under each special religion, or church, there was provision for the special theology, worship, ritual, ecclesiology, history, etc., but also the last three sections (PW-PY) provided for general and comparative studies under the captions, Religious Service and Ministry, Societies, Missions, etc. which might be subdivided by religions and churches. But this inconveniently separated certain practical subject under Christian churches from similar subjects studied comparatively.

Therefore Schedule 10, an auxiliary systematic schedule "For Sub-classification Under Any Religion, Church, Sect, Or Religious Community" has been added, and Class P has been revised so as to remove the objection just cited.

The first change in Class P is section PD, which was not used in the first edition and is now assigned to Worship, Devotional Religion, and Theology. PF, History of Religion and Comparative Study of Religions, is similar in the two editions though more expanded in the second. From this section on there are changes in the order of the sections and in their expansions.

As an illustration of the less important changes in Physics, Astronomy, etc., in class BD, Dynamics, Kinetics is changed to precede instead of to follow Statics, and the subdivision "Elasticity and Acceleration" is omitted. BE, Matter and Energy, has an added subdivision—Molecules in general.

Brownian Motion. BN, Electrical Technology, Special, differs in the order of its subdivisions and in their content.

The entire book has been reproduced on a larger scale and by an improved process. Unfortunately it is still less easy to read than is print. This is especially true of the symbols for the classes and sections, particularly when they are italicized. Nevertheless, the expense of printing would probably be prohibitive, and the advantage of having new editions as important changes are made is appreciated.

It is to be hoped that the author of this classification system will continue to work in this field and that interested classifiers will avail themselves of the opportunity of borrowing the expanded schedules. They may be obtained from the Special Library Association's New York headquarters for further testing.

SUSAN GREY AKERS

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Directions for the compilation of bibliographies. By HELEN A. BAGLEY. Philadelphia: Drexel Institute, 1936. Pp. 3-10.

This little pamphlet, prepared by an assistant professor of library science at Drexel Institute, is evidently to be used as an introduction to bibliography for beginners. Small in size but broad in compass, this work includes sections on "Methods recommended," "Sources to be consulted," "Choice of subject headings," "Form of entry," "Annotations," "Arrangement," "The preface," "Form for final presentation," and "Suggested list of indexes."

There are a number of commendable points in this pamphlet. For one thing, accuracy—all too frequently lacking in the makeup of the would-be bibliographer—is stressed. "A short list well done is of greater value," says Professor Bagley, "than a long list of inaccuracies." Another suggestion, that every item collected should, for the compiler's convenience, list the source used, is really a good one; in this way, of course, duplication of effort can be avoided and a complete list of sources can be assembled.

More than a dozen examples of how books, pamphlets, parts of books, periodicals, and government publications should be listed bibliographically by the student are given, and a number of samples indicate the methods to be employed in annotating. Six arrangements for the bibliography are suggested: by author, by "organized arrangement," by geography, by chronology, by primary and secondary sources, and by call numbers. This last, by the way, seems not particularly useful.

A brilliant suggestion next comes to attention; it is that the preface of a bibliography should indicate in what way the work has been limited. To many bibliographers this has never occurred, seemingly, for a number of them have omitted even the vaguest hint as to what has been included and what

has not. Indeed, it frequently happens that the average title-page of the average bibliography does not help solve the problem concerning the scope of the work. Finding no preface, no explanation of the purpose or extent of the bibliography, or discovering a preface which obscures rather than reveals this information, the user must plunge blindly into the text, hoping to search out that for which he is looking. This pamphlet's warning is certainly timely, for every bibliography, of whatever kind, should contain a statement of the book's purpose and limitation.

The section on form is perhaps the least useful of all, for the bibliographer is told to "study sample bibliographies and decide on the form you wish to use." Surely there is a host of bibliographies whose form no one would suggest as models to be followed by fledgling bibliographers. Indeed, one might almost say that the form must be suggested by the kind of bibliography under consideration; what may be good form for one type of work may well be completely unsatisfactory for a different type. Yet any form will prove unserviceable to some users; the problem is to satisfy most of the users. In any event, a few samples of good bibliographical form of varying types could have been given here. The beginning bibliographer can hardly be expected to select a good form for himself.

Some of Professor Bagley's opinions, too, should be closely examined. The statement that "very few subject bibliographies claim to be exhaustive" is followed almost at once by the asseveration that "most finding lists made for library use are more helpful if they are selective." This last is definitely untrue; all other things being equal, the complete, or nearly complete, bibliography is much more useful than the selective kind. The chief difficulties with selective lists are that they are often based on subjective evaluations, and, more important, no one can tell how much of the complete field the compiler surveyed before making his selection. Several recent selected bibliographies, for instance, included half-page articles in relatively unimportant magazines while they excluded full-length books on the same subject. Undoubtedly it is easier to compile a selected bibliography than a complete one, but the difference in labor is more than recompensed by added helpfulness to the user.

In the section on "Form of entry," the author gets into difficulty. Of the three sample periodical citations, each is different: the first, an anonymous article, is listed by title; the second lists title, then author, and finally the periodical; the third lists the periodical, the title, and then the author. How will the student find a proper form in this maze?

Several errors may be noted. The much-too-often misspelled *Readers' guide* is here twice given as *Reader's* (pp. 4 and 5). The title of the book compiled by Phyllis M. Riches is incorrectly listed as *An analytical bibliography of universal collected biography in English*; it should read: *An analytical bibliography of universal biography, comprising books published in the English tongue in Great Britain and Ireland, America and the British Do-*

minions. Errors of this kind, of course, should not be displayed to beginning bibliographers.

We await with interest future editions of this work.

THEODORE G. EHRSAM

*Hofstra College
Hempstead, New York*

A catalogue of English newspapers and periodicals in the Bodleian Library, 1622-1800. By R. T. MILFORD and D. M. SUTHERLAND. (Reprinted from the *Proceedings and papers of the Oxford Bibliographical Society*, Vol. IV, Part II.) Oxford: Oxford University Press, 1936. Pp. 184. £1 5s.

The absence in England of any publication corresponding to the *Union list of serials*, or the forthcoming *Union list of newspapers* in America, makes all catalogs of this sort highly desirable. Investigators may be somewhat surprised to learn that the Bodleian did not begin seriously to collect periodical literature until after the middle of the nineteenth century. But the inclusive dates indicated in this title show that much has now been done. The arrangement is alphabetical by title, giving the name of the author, or the editor, and names of important contributors where such data can be ascertained. The numbers of the issues and the dates are clearly given with the year date in gratifyingly bold type. Place of publication and imprint date appear, of course, with the size. Many entries give a great deal of useful bibliographical information. The thoroughness of this catalog may be inferred from the fact that, for example, certain single entries are indicated as being bound in some edition of Shakespeare's *Julius Caesar* or a volume of Fielding.

The usefulness of periodicals as a source of information has always been recognized, but their very nature has made them somewhat of a problem for the librarian. Particularly is this true in libraries where the institution has only a single copy (albeit a very important and valuable one) of a given periodical. These singletons, or brief runs, are the despair of the cataloger, and are often set aside until such time as the cataloger can find the leisure to work with them—a happy time which seldom arrives. Or perhaps the cataloger puts them off, hoping to get through the press of work involved with ordinary books. Books fit so nicely into orthodox cataloging schemes. The cataloger who puts periodicals aside may never get to them at all. Thus far, American bibliographers have done a little better than their English colleagues in this business—a fact, however, not to be explained by the earlier printing and greater number of periodicals in the British Isles. The work of Mr. Clarence Brigham, in his *Bibliography of American newspapers 1690-1820*, and of Miss Gregory on later papers indicates that America more than makes up, in the numerous and far-flung sources of its periodicals, what it lacks in the priority of printing.

In England a considerable stimulus to the collecting of periodicals and the compilation of lists, has been given by an antiquarian book-dealer, Mr. Graham Pollard, whose own catalogs are a model of precision and are themselves used widely as bibliographies. The editors of this new Bodleian catalog indicate that Mr. Pollard has given them many helpful suggestions in the compilation of this work.

RANDOLPH G. ADAMS

Clements Library
University of Michigan

International bibliography of historical sciences. Ninth year, 1934. Edited for the INTERNATIONAL COMMITTEE OF HISTORICAL SCIENCES. New York: H. W. Wilson, 1936. Pp. xliii+489. \$9.90 in paper; \$10.65 in cloth.

A minor cause of international conflict, which, however, seems never to have led to bloodshed, was the question whether more books were written on Martin Luther than on Napoleon Bonaparte. The present bibliography will not help to solve this problem, for both personages are represented therein by 13 titles. But this dead heat seems likely to be a matter of extremely negligible proportions in the future. Tied though they are, Luther and Napoleon run a very bad fourth to a new galaxy of stars—Lenin with 50 entries, Marx with 28, and Engels with 18. Wallenstein, with 11 citations, crowds Luther and Napoleon; and Jesus Christ, Cicero, Cromwell, and Charlemagne (listed as Karl der Grosse) come behind Wallenstein with 9 titles each. Is this clear-cut victory of the Communist triumvirate another proof that the old order changeth in historiography, or does it mean only that Bolshevik propaganda is a very effective instrument? The answer seems to be a tribute to propaganda; the great majority of the books and articles dealing with Lenin, Marx, and Engels come from Russia, which exhibits proportionately less interest in other persons and subjects. The authors who for the year 1934 are cited the most often are: Jorga (with 13 titles), Croce (with 10), Rostovzeff (with 9), and Pirenne (with 8). The native American historian most often cited is Bernadotte Schmitt (with 4). There are altogether 5,977 entries, most of them articles culled from around three thousand periodicals. Only those periodicals (about three hundred) which are not contained in the proposed *World list of historical periodicals* are given in a "List of periodicals" which precedes this volume. An excellent Index containing approximately seven thousand names of authors and historical persons, supplemented by another of about twelve hundred geographical names, makes consultation easy. The arrangement of titles under a series of logical subdivisions also adds to the book's usefulness. Altogether the present volume is worthy to be placed beside its predecessors in this series.

LOUIS GOTTSCHALK

University of Chicago

The history of children's literature. A syllabus with selected bibliographies.

By ELVA S. SMITH. Chicago: American Library Association, 1937. Pp. xviii+244. \$4.00.

Teachers and students of children's literature, both those in library schools and those in teachers colleges and normal schools, as well as reference librarians, will welcome this guide to the history of literature for children from 1659 to 1900. The subtitle, "A syllabus with selected bibliographies," while defining the work exactly, does not represent the interest and vitality inherent in this book, which those of us who have been her students feel is due to the author's own fascination for and knowledge of her subject. For example, in the note about Thomas Day, one reads "a valuable study of an eccentric, but versatile and interesting personality, an 18th century idealist."

The book does not purport to be an exhaustive bibliography of the subject, even within any period range. The author states that a few representative titles are suggested, but that there are many others of interest which may be added or substituted.

In the Preface, Lillian Smith, of the Toronto Public Library, emphasizes the sociological importance of a chronological outline of children's literature. She says that such literature "reflects the development of educational ideas through the centuries, as well as the family life, dress, speech and conventions of each succeeding age" and reveals how these "standards of taste, morals and education are reflected in the ideas it attempts to superimpose on the child who reads."

The book is an outgrowth of the course in the "Development of children's literature" as it is given in the Carnegie Library School, and this in turn, as the author states in her Introduction, originated because of the possession by the Library School of a small, but choice, collection of early children's books. And thus evolved this invaluable teaching aid in the highly specialized field of the history of children's literature.

The syllabus is excellently arranged for use. The book begins with a chapter on the historical study of children's literature and a general Bibliography, including periodical articles, collections illustrating the history of children's literature, catalogs and bibliographies, and supplementary references to books useful as a background for the study of child life and illustration. Then follow the period outlines, beginning with the Anglo-Saxon period, becoming ever fuller as the literature increases in the eighteenth and nineteenth centuries. These outlines, which are particularly full and suggestive, are followed by bibliographies divided into: general references to the period, biographical sketches, individual authors with representative works, and biographical and critical works. Depending upon the period, additional subdivisions are added, such as "periodicals," "educational background," etc. These period outlines and bibliographies constitute the main body of the book.

The authors and books stressed are English and American, but include a

few French and German authors who had some primary influence on English writers. There are very full bibliographic notes so that old and rare editions may be identified, and sometimes the location of the original edition is given.

The annotations and comments, descriptive rather than critical, range from very brief to full, but are adequate in placing the particular book as a contribution in the period under discussion; e.g., "a slight story, but it produced a great sensation, when it came out in 1815 in England"; "a good example of the religious story for the poor." Sometimes there is distinct flavor to the note, surprising when one considers the numbers of titles annotated. These comments, often quotations, provide vivid sidelights on characteristics of the period, so that simply running through a period of the syllabus is both instructive and entertaining. The following from *The lady of Godey's* by Mrs. Ruth Finlay is an example of the full note:

Valuable, not only as a full-length portrait of Mrs. Hale but for the habits, customs and viewpoints of her era. See particularly the chapters "A female writer" and "Mary's lamb—and Mr. Ford," p. 263-305. See also p. 310-11. Nine plates in color and other illustrations in half-tone, including a reproduction of the well-known poem as it appeared in *The Juvenile Miscellany* in 1830.

A chronological list, illustrating the development of children's literature in England and America, 1659-1900, follows the outlines and bibliographies of periods. The Index is by author and title and, to facilitate the use of the bibliographies, additional name entries for authors of periodical articles and of material in composite books have been included.

The scope and omissions are fully stated in the Introduction, i.e., that children's literature, as a term, does not, in this work, imply productions of literary merit necessarily, and that the present century is not included. Traditional literature—fable, myth, and folk tale—is for the most part excluded, as are also textbooks, children's periodicals, except for a few of the most important, and the field of illustration of children's books, except for some of the "high spots." A few outstanding writers, those most typical of a given era, are singled out for detailed study; other authors are considered more briefly; many of necessity have been omitted. The author assumes that additions and substitutions will be made as needed, according to the interests of instructor and students and the resources accessible. "The editions specified are those available in Pittsburgh, but not necessarily always the most desirable." "For some of the more recent authors, such as Kipling, only a few references are given, as there is a wealth of material which is easily obtainable." General reference books have not been included. The bibliographies are limited, for the most part, to the resources of the Carnegie Library of Pittsburgh and the Carnegie Library School. To this reviewer the whole scheme is very logical and adequate to the purpose.

The plan of presentation of the material is carefully worked out and very flexible, making possible rearrangement of topics and titles to fit many pur-

poses. The author states in her Introduction that "in so brief a presentation only general tendencies can be indicated. For a comparatively short course a late starting-point may be selected. Certain topics may be emphasized and others more lightly touched or omitted."

This summary of children's literature from 1659 to 1900 will be invaluable as a reference book to all those interested in the development of children's literature and of social history, since the social development of the child through the ages is a vital part of such a subject. Also those interested in child study, whether from the psychological or purely educational angle, will find much valuable material. Parent-teachers associations, literary and study clubs, as well as the general reader, will find that the outlines and bibliographies provide stimulating suggestions for worth-while programs and study. The book may also be used as a buying guide for public libraries, library schools, and educational departments of institutions which wish to check their collections on any particular phase of children's literature before the twentieth century. The collector of children's books will find tempting items to set him scanning second-hand and special catalogs. Many of the books will not be available in any but a very large public library, but this does not mean that the work will not be most helpful to a variety of people.

Bibliographies become superseded very rapidly, but the fact that this work closes with the end of the Victorian period will lessen this danger. In its field it may well become a bibliographical classic. This reviewer should like to see a similar work attempted for the changeful, crowded, and important past three decades of children's literature, broadly interpreted to include not just books of literary merit, for the "outside the pale" class of literature is extremely important as revealing trends and tendencies, and perhaps we have been too dogmatic about keeping it out of our library aids.

MILDRED P. HARRINGTON

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Children's catalog. A dictionary catalog of 4000 books with analytical entries for 1020 books and a classified list indicating subject headings. 5th ed. rev. Compiled by SIRI ANDREWS. New York: H. W. Wilson, 1936. Pp. viii+979. Sold on service basis.

Publication of the *Children's catalog* in its various formats is always an occasion for professional satisfaction. This fifth quinquennial edition, however, justifies more than merely casual appraisal, because it represents the rounding out of twenty-eight years of usefulness. It is fortunate that since the beginning certain distinctive characteristics have been preserved and furnish a medium for critical evaluation.

The technical aspect of the catalog requires first consideration. In the original, and in all succeeding editions, the dictionary arrangement by author,

subject, and title has been followed. This has enabled librarians to compare their own cataloging procedure and in many smaller communities actually supplies the catalog. Critical annotations, culled from authoritative lists, are found under the titles. The number of sources consulted for this purpose has grown from twenty-four to more than one hundred. By providing analytics, the *Children's catalog* from its very inception has met curricular demands and permitted even limited collections to be of the greatest possible use. The quality of this service can be judged by the fact that, in 1936, 1,020 titles were analyzed as compared with 500 in 1909.

Seven years ago, however, under the competent editorship of Miss Sears, three new features were added, namely, the classified list, the graded list, and the starring of titles for first purchase to eliminate the necessity for abridged editions.

Of paramount importance also in a catalog of this kind is the book selection. The 1909 edition listed three thousand titles. In spite of the tremendous output of children's books in the interim, only eleven hundred titles have been added. This is a remarkable barometer of the high standards which the editors and their collaborators have rigidly maintained. The method of selection has been based upon the subjective opinions of specialists, either as expressed personally or through their recommended lists. The emphasis throughout has been on recreational reading, even if, in the effort to consider the needs of the school library, textbooks have been frequently included.

A comparison of the distribution of titles yields interesting data. Even allowing for shifts in classification, the proportion of fiction to non-fiction in the various editions remains practically the same, namely, one-third. A new emphasis on the interests of the younger child has increased the ratio of easy reading material from 3 to 9 per cent.

In the non-fiction group, literature predominated twenty years ago; by 1930, it was folk lore; while today scientific and technical subjects have taken the leading position and comprise 25 per cent of all the titles listed. The vitality of the book selection is perhaps best exemplified in the field of transportation, biology, and zoölogy where the number of omissions and additions of titles is approximately equal. History, biography, and civics are also subjects that have been definitely enriched by the weeding out of obsolete material and the substitution of new. The sensitivity of children's literature to new movements and ideas is illustrated by the inclusion of such subject-headings as "Auto-giros," "Economic planning," "Einstein," and "Television," which appear for the first time in the current edition of the *Children's catalog*.

Notwithstanding the inevitable diversification in the field of fiction, a striking equalization of titles, by omissions and additions, is also evidenced here. A notable but constructive exception is the appearance of new titles on South America, Russia, Mexico, and the Antarctic. This new interest in remote places is matched by the steady inclusion of titles on sectional America, the South in particular. Nor have the editors been lacking in the courage

necessary to eliminate orthodox titles which hold scant appeal for the modern boy and girl.

The 1936 volume is especially distinguished by a timely editorial viewpoint which has been achieved without compromising technical practice. This is due in large part to the specialized background in the field of library service to children which Miss Siri Andrews has brought to this work.

Instead of a separate list of books for professional use, these are now included with the titles for children's reading in the main dictionary catalog. Supplementing the annotations, a large number of titles with full bibliographical imprint has been added—thereby increasing the actual number of books listed from 4,100 to more than five thousand.

Another valuable innovation is the meticulous noting of editions other than the one catalogued; as, for example, changes in content, paging, illustrations, and cost. To the librarian with limited funds such a contribution is bound to be of the utmost practical value in the matter of book-buying.

Under such subjects as "Travel" and "History," many new and important subdivisions have been added which reflect the current trend in educational procedure. The differentiation as between types of material available in the foregoing and allied fields is cleverly indicated by symbols; for example, *s* means source and *p* means pictorial maps, etc.

Cataloging of plays, not only by author and title but by subject as well, is an important feature of the fifth edition. In this connection, information with reference to producing rights, royalties, etc., is especially pertinent.

Finally, the fifth edition is more than a comprehensive catalog and book-buying guide; it is in reality a bibliographical history of children's literature. For those titles which have stood as milestones in children's reading, original date of publication has in every case been noted, even to their preliminary appearance in periodicals.

The present *Children's catalog* is a worthy successor to the volumes that have preceded it. It stands as a technical instrument of unusual excellence, a reading and buying guide adapted to the needs of small and large libraries alike—an expression of the variety, timeliness, and high quality of children's literature which interprets life to the youth of today.

HELEN MARTIN ROOD

Cleveland, Ohio

Children and radio programs. A study of more than three thousand children in the New York metropolitan area. By AZRIEL L. EISENBERG. New York: Columbia University Press, 1936. Pp. xvi+240. \$3.00.

The effect of listening to the radio is now perhaps of greater concern to parents, teachers, librarians, pastors, and all who are interested in the education and development of children than is the effect of the motion picture. In the New York metropolitan area, according to the results of Dr. Eisenberg's

study, a radio is owned in 91 per cent of the homes, and the average child ten to thirteen years of age listens to the radio seven hours a week. To gather information on children's listening habits and related matters, the author addressed a questionnaire to 3,345 children in Grades V-VIII, chiefly in Grade VI. He also interviewed 640 of the children, analyzed 2,610 compositions giving their reactions to radio programs, and secured answers to a questionnaire from 62 per cent of the parents.

The questionnaire dealt with a large variety of questions pertaining to the children's listening habits: the programs they listen to and those they like; the reasons they give for liking or disliking programs; the effects they think follow, both good and bad, such as learning, disturbance of sleep, imitation of radio actors, and taking part in radio contests. The questionnaire to parents inquired concerning their opinion of the effect of the radio on their children and on the life of the family.

The scope of the study and the care with which it was carried on make it a valuable contribution to our knowledge of the effects of the radio upon children. Many of the findings consist of objective facts, which may be accepted as well established for the area in which the study was made. Others are more subjective—for example, those dealing with the children's preferences—but the evidence on them is reasonably convincing. Others are still less certain, such as the children's opinions as to what they have learned from the radio, or as to the reasons for their preferences; but even these may be given provisional and tentative credence.

The study as a whole, as interpreted by the author, stresses the beneficial more than the harmful effects and possibilities of the radio. It points out improvements which may be made and ways in which it may be used to greater advantage. It is not surprising to find that children express positive interest and approval, but it is rather unexpected, in the light of the criticisms of the radio which have been voiced by parents' and teachers' organizations, that the parents overwhelmingly approve. Perhaps the mine run of parents take a more common-sense and realistic view of the radio in relation to their everyday surroundings and activities than do the professional leaders who compare it with the ideal rather than with the actual. The author concludes his report with a series of sensible recommendations and suggestions for further study.

FRANK N. FREEMAN

University of Chicago

Learn and live. The consumer's view of adult education. By W. E. WILLIAMS and A. E. HEATH. London: Methuen, 1936. Pp. viii+271. 5s.

Many volumes on adult education and its effects upon the public have appeared, and here is perhaps the first appraisal by students of "the social, mental and emotional consequences of Adult Education." Questionnaires were distributed to students and former students of Ruskin College, Oxford, and to

tutorial classes of selected areas in England, Scotland, and Wales. This book is a selective compilation of the answers received.

The quotations from answers given by the students are classified into sections such as: purpose of joining classes, class difficulties, whether or not adult education has added to their happiness, the relation of student to tutor, creative work done, the effects on family life and social contacts, and a general criticism of adult education with some excellent suggestions for improvement in methods and subject matter. However, testimonials of any kind seldom strengthen a cause, especially when they pertain to human emotions and motives.

The last chapter, "The best is yet to be," is most valuable to educators, especially to teachers of adult classes. Here a number of students express the need of preparatory classes. One ably expresses it:

I think students should pass some sort of matriculation; then they would have a starting-point. I have read Smiles' *Self Help* and numerous lives of self-taught men and women who say they have taught themselves. It's all damned lies and moonshine. I have tried it. If some Tutor had taken me on one side and said—"now you take these subjects first, and when I think you are proficient we will go further"—what a difference there would have been!

Another says: "I think the biggest drawback is varying standards at which the student starts."

Throughout the book no light is thrown on the grade of intelligence of the students. The sobriety of most of the answers gives one the impression that the students are a docile lot, painfully eager for "uplift" and self-expression. One can't help but wonder what contrast the answers of American adults would present. There is much pathos, occasional humor, and common sense intermingled. One man gave his reason for joining a class: "To try to keep from too frequently visiting a village pub"; another: "I had a vague notion that I might be able to do some good in the world if I educated myself. Eight years of W. E. A. work have almost killed that idea."

No one can read the book at one sitting, as the stereotyped responses tend to become monotonous. To a worker in the field of adult education some interesting deductions can be made from the book, but surveys like these will fail to serve a general purpose until those who are familiar with the circumstances, environment, etc., throw more light upon the background and bring the whole picture to a focus.

PAULINE J. FIHE

Public Library, Cincinnati, Ohio

Index to vocations. Compiled by WILLODEEN PRICE and ZELMA E. TICEN. New York: H. W. Wilson, 1936. Pp. 106.

Since it has been so forcibly brought to our attention in recent years that too many occupations are overcrowded or occupied by a large proportion of

misfits, an increasing number of librarians feel that no phase of their work is more important than that of helping young people, as well as maladjusted adults, to find the vocation in which they can fill a need and be both efficient and contented. As an aid to this end, the *Index* in hand will be most welcome.

The *Index to vocations* analyzes 115 vocational books and pamphlets, most of which are listed in the *Standard catalog for public libraries*, *Standard catalog for high school libraries*, and the *Booklist*. Those considered most useful by the compilers have been starred as a guide to libraries beginning a collection in this field.

Recency of date is especially important in the selection of vocational books, if accurate information is to be obtained from them. This has been taken into consideration. The majority of the books analyzed were published between 1930 and 1936, but some titles published as far back as 1921 have been included as still useful. Care must be exercised in the use of older books. They are often valuable for information concerning general training or processes involved but inaccurate as to salaries to be expected, lists of schools, and new developments in the field in question.

Arrangement is alphabetical by occupation, 1,830 specific headings being used. Helpful features are the inclusion of references to short vocational biographies, as Part II of the *Index*, and a list of books particularly useful to vocational teachers and counselors.

Some users of the *Index* would undoubtedly prefer the grouping of the entries by subdivisions under broad headings somewhat in the manner of Platt's *Book of opportunities*, with cross-references from specific headings in their alphabetical place, but either arrangement is usable provided there are adequate cross-references. The book's chief fault is its lack of cross-references. This defect is especially apparent when the book is used by the student and is even troublesome for the library staff, both trained and untrained. A few instances are the absence of cross-references from "Hostess" to "Hotel-worker—Hostess" and "Air hostess"; "Insurance worker" to "Actuary"; "Mining engineer" to "Assayer" and "Metallurgical engineer"; "Librarian" to "Cataloger"; "Artist—Commercial" to "Designer—Industrial." Closely related fields, such as advertising and publicity, structural engineering and building trades, need "see also" references for most effective use.

Distinction of meaning between some of the headings is so slight as to amount to virtual duplication. It would seem preferable, for example, to group together "Salesperson—Traveling" and "Commercial traveler"; "Book-keeper" and "Accountant—Bookkeeper"; "Multigrapher" and "Ditto-machine operator." Certainly there should be references from one heading to the other if both are used.

There are occasional omissions, as under "Postal service," where no mention is made of the good "Commonwealth Series A" monograph on this subject, or "Sculpture" where reference to Hatcher's *Occupations for women* does

not appear. In spite of these minor deficiencies, the *Index* is a much-needed and valuable reference tool for librarian, counselor, and student.

ISABEL DOUGLAS

White Plains Public Library
White Plains, New York

The improvement of education. Its interpretation for democracy. Fifteenth yearbook. Washington, D.C.: Department of Superintendence of the National Education Association of the United States, 1937. Pp. 328. \$2.00.

From time to time educators have surveyed their work in terms of the values to be gained by the young people they were trying to educate. The theories underlying the process were kept plastic, and the methods and techniques of teaching were revised as the needs of the school population changed. The most generally accepted objective was training for citizenship in the broadest sense of the word. Democracy was taken for granted.

A different interpretation is evident in the 1937 *Yearbook*. It is a pronouncement that concerns itself with the social order in which the school functions. It takes as its premise the statement:

If social change is inevitable, and it most certainly is today, educational participation in this process should make an especial appeal to all. Such an approach to the problem of social transition offers a prospect of saving everything valuable in the present social heritage.

The implications are that democracy cannot be accepted as a *fait accompli* and that education must take a hand in training young people through a necessary transition so that they may meet the problems of the coming new order in a democratic way. This can be done only by examining the obvious maladjustments in the present order with a view to giving the knowledge, standards, and attitudes needed to meet and solve the problems intelligently.

Such a program would bring controversial subjects into the curriculum. The *Yearbook* makes it clear that "board members should recognize that democracy demands consideration in the school of controversial issues." The inclusion of controversial subject matter in the training of young people presents certain difficulties which are recognized in the *Yearbook*, but which are not treated in a definite and practical manner. It involves the formulation of courses at different levels which will give young people an accurate idea of the social order in a state of flux; textbooks written with fairness showing all sides of a question; teachers without bias, trained in the economic, social, and political thought of the past and the present; young people of varying ages and mental ability able to digest concepts upon which specialists cannot agree; parents so broad-minded that they would be willing to have their children indoctrinated with views they themselves do not hold.

The *Yearbook* is divided into three parts dealing with (1) the social scene,

(2) the educational responsibility, and (3) official records. The bibliographies are up to the minute and include many titles not heretofore considered a part of educational literature. The book itself is attractive, with reproductions of figures from the recent volume on economic and social life, *Rich man, poor man*. Members of the Department of Superintendence do not consider the *Yearbook* as an official pronouncement. However, coming from that source, it is of the utmost importance because it reveals a trend of educational thought the results of which may be far reaching.

HANNAH LOGASA

University of Chicago High School Library

Bibliographies and summaries in education, to July, 1935. A catalog of more than 4000 annotated bibliographies and summaries listed under author and subject in one alphabet. By WALTER S. MONROE and LOUIS SHORES. New York: H. W. Wilson, 1936. Pp. xvi+470. \$4.75.

For all needing to use the professional literature of education, this publication is an incomparable Aladdin's lamp. Any educator who recognizes this lamp when he sees it and "rubs" it properly will at once have troops of powerful library genii working for him. By their aid he can locate in five minutes significant references on his problem that he himself could not have discovered in five days, sometimes not in five weeks. If the volume can become known to, be made available for, and be used by, enough educators, it will release millions of man-hours in the library that have hitherto been spent on the drudgery of merely locating the desired references. One is fascinated by the thought of the educational betterment that can reasonably be expected when these millions of hours can be devoted instead to mastering, interpreting, using, and applying the contents of the references.

The volume aims to list all the important bibliographies and summaries of educational references published in the United States from January 1, 1910, to July 1, 1935. Selected items are entered for the period before 1910—a date which was chosen as representing the beginning of the modern professional literature of education. Summaries are included because

annotated bibliographies, since about 1925, have gradually been replaced in educational literature by an increasing number of summaries. A few of these summaries . . . are widely known; but a much larger number, equally as valuable, scattered through our educational literature, have been lost for lack of an adequate bibliography of summaries.

The arrangement is "the dictionary arrangement employed by the *Education index* . . . a straight alphabetical scheme, with subjects, authors, and cross-references in one alphabet." This decision followed a canvass of librarians' and educators' opinions. The same bibliography appears under both its author's name and any suitable subject heading. It is therefore easy to find bibliographies on a topic or to locate a bibliography when one remem-

bers only the author's name. Good cross-references direct the user at once to related headings and their bibliographies.

The subject headings were carefully worked out in accordance with previous standard headings and supplemented with common-sense modifications found advisable in the course of the work. The reviewer has tested out these headings with a number of sample topics and has always been able to locate his references quickly.

The entries give the usual bibliographic data in convenient form, with some inescapable variations. The annotations include period covered, number of references, degree of completeness, character of references, arrangement, and kinds of annotations. For each summary the general character is indicated.

It is humanly impossible to bring any huge undertaking of this kind to absolute exhaustiveness and accuracy. The matter of selection is baffling enough. In the areas of "School finance" and "School publicity" which the reviewer, because of his previous experience, used as checks, the selection is intelligent. Some earlier bibliographies have evidently been omitted because they can easily be picked up in later bibliographies that are listed. On "Swimming" the only bibliography given is dated 1924, and one wonders why the recent bibliographies of T. K. Cureton were not entered. It would, however, be absurd to expect any two men to do this work with equal thoroughness throughout. In all probability no other four men in the country could have done as well as these two with their special training and experience. This also holds true for mechanical errors, as certain to creep in as men are to be killed in building a great bridge. Thus under the heading of "Publicity, school" the same entry appears twice—once correctly with "Friswold" as author and again attributed erroneously to "Triowald." The authors have done well to get the volume out when it will do the most good, trusting to corrections in later editions on what are, after all, trivial slips.

As the authors state, it will be possible to keep this volume up to date by using the subsequent numbers of the *Education index*. In short, there will henceforth be no valid excuse for any educator's not knowing where to find promptly the important professional literature on any problem or topic in his field.

A great many so-called "contributions" to education have about as much right to the designation as a Kentucky colonel has to the title of a military officer. But this volume is a real contribution to the profession. Its authors and publisher have done a signal service to education by issuing it. Let us hope that the educators of the country will promptly show their gratitude, not by words, but by securing and effectively using the volume.

CARTER ALEXANDER

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BOOK NOTES

Afrikaanse Boekweek. Onder beskerming van die Pretoriase Kultuurraad en die Universiteit van Pretoria. Katalogus van Boeke. Tentoongestel vanaf 17 tot 27 Junie, 1936, in die Pretoriussaal, Pretoria. Pretoria, South Africa, 1936. Pp. 122.

This volume was issued as a part of the commemoration of an Afrikaans "book week" during June, 1936. This celebration was fostered by the Pretoriase Kultuurraad of the University of Pretoria.

The first portion of the bibliography lists books in Afrikaans in the field of general literature and is notable as the first attempt at a national bibliography of books in this language. This section, which comprises some seventy pages, is followed by a short list of children's books in Afrikaans, and the bibliography finishes with a section containing entries for Dutch books concerning South Africa.

The entire work is an interesting addition to the list of national bibliographies.

A bibliography of Minnesota territorial documents. Compiled by ESTHER JERABEK. St. Paul: Minnesota Historical Society, 1936. Pp. xvi+157. \$1.25.

This bibliography and guide to the official documents of Minnesota Territory covers the years from 1849 to 1858. The arrangement is first by issuing authority and then by date of issue. A carefully compiled analytical index by subject and person adds immeasurably to the usefulness of the tool. The author and the Minnesota Historical Society are to be complimented on a piece of work well done.

Danzig—Polen—Korridor und Grenzgebiete: Eine Bibliographie mit besonderer Berücksichtigung von Politik und Wirtschaft. Edited by FRITZ PRINZHORN. Jahrg. 1+. 1931+. Danzig, 1933+.

This bibliography attempts to include all books and articles relating to the now famous Polish Corridor and the surrounding provinces. It will be of value to American librarians not only because of interest in the subject field but also as an example of the careful, exhaustive compilation of a local bibliography. The bibliography is classified first under natural country division—Danzig, Polish Corridor, etc., and secondarily under subject. The classification will interest those who engage in similar compilations. The extent of the bibliography is shown by the inclusion each year of several thousand citations. Naturally, most of the articles are in German or in Polish, but there is a liberal sprinkling of citations in French, English, and other languages. This bibliography, from a casual examination, appears to be an excellent example of the type of compilation at which German librarians especially excel.

The library and the librarian of the Technische Hochschule deserve much credit for producing so remarkable a bibliography under the very difficult conditions prevailing in all educational institutions in Danzig.

Fünf Jahre Hamburger Staats- und Universitäts-Bibliothek, 1927-1932. Von GUSTAV WAHL. Hamburg: Hamburger Staats- und Universitäts-Bibliothek, 1936. Pp. 98+[4]. RM. 6.

The years 1927-32, on which this book reports, show in nearly all departments of the Hamburger Staats- und Universitäts-Bibliothek an upward trend, even if financial stress sometimes imposed restrictions. The scope of the library was broadened in

two ways—as to the clientele and as to the book collection. The library's "Volksverbündenheit" was emphasized by the opening of its doors to every citizen; and the completeness of the book collection was restored in adding or extending fields such as law, economics, medicine, which had been neglected for a long period. This striving for a well-rounded collection did, however, not diminish the care given to the special collections. Some of them—let us mention only the "Weltkriegssammlung" and the "Deutschumssammlung"—are quite unique. The departments and collections have been intrusted to subject specialists. Their scholarly interest found expression in the publications of the Hamburger Staats- und Universitäts-Bibliothek, revealing to a larger public manuscripts and other valuable treasures of the library.

Social work year book 1937. A description of organized activities in social work and in related fields (fourth issue). Edited by RUSSELL H. KURTZ. New York: Russell Sage Foundation, 1937. Pp. 709. \$4.00.

To those who love their fellow-men and long for the formation of a kindlier social world for them to live in, the biennial visits of the *Social work year book* are very welcome. It is always heartening to note the growing array of agencies devoted to the relief of human suffering and the improvement of methods in social work. Probably the greatest single advance noted in this issue is the passage of the federal Social Security Act, which commits the government to a continued responsibility for minimum security to large numbers of its citizens.

Librarians will be particularly interested in the lists of references appended to the topical articles. These include 1,028 books and pamphlets and 644 magazine articles, constituting, in the opinion of the publishers, the most up-to-date and extensive social work bibliography published.

In addition to the general Index, the topical articles, etc., are self-indexed, since they are arranged alphabetically in accordance with Cutter's *Rules for a dictionary catalogue*.

Union catalogues. A selective bibliography. Compiled by ARTHUR BERTHOLD. With an Introduction by ERNEST CUSHING RICHARDSON. Philadelphia: Union Library Catalogue of the Philadelphia Metropolitan Area, 1936. Pp. xvi+70 (planographed). \$1.15, postpaid; H. W. Wilson, New York, agents.

This bibliography of 356 items filling seventy mimeographed leaves covers the material on union catalogs through the year 1936. That not much of the material listed will be of great assistance to the technician faced with the problem of compiling a union catalog is scarcely the fault of the author of the bibliography. The following statement from the Preface is illuminating at once of the content of the present volume and of the trend in existing writing on the subject: "Taking the references as a whole, it must be stated that while a good deal has been written about the aims, implications and usefulness of union catalogs and lists, there are comparatively few articles which describe the technical processes of compilation."

BOOKS RECEIVED

The following publications have been received at the offices of the *Library quarterly*:

Audio-visual aids for teachers. In junior and senior high schools, junior colleges, adult education classes. By MARY E. TOWNSEND and ALICE G. STEWART. ("Social science service series," No. 2.) New York: H. W. Wilson, 1937. Pp. 131. \$0.75.

Basic reference books. An introduction to the evaluation, study, and use of reference materials with special emphasis on some 200 titles. By LOUIS SHORES. Preliminary edition. Chicago: American Library Association, 1937. Pp. x+406 (planographed). \$4.00.

A bibliography of the writings in prose and verse of Jonathan Swift, D.D. By H. TEERINK. The Hague: Martinus Nijhoff, 1937. Pp. xii+434. Gld. 20.

Bibliography on land drainage. Compiled by DOROTHY W. GRAF. Washington, D.C.: U.S. Department of Agriculture, Bureau of Agricultural Engineering, 1936. Pp. 245 (planographed).

Booklist books 1936. Selected by the vote of many librarians and compiled by the STAFF OF THE BOOKLIST. Chicago: American Library Association, 1937. Pp. 60. \$0.75.

Book numbers. A manual for students with a basic code of rules. By BERTHA R. BARDEN. Chicago: American Library Association, 1937. Pp. 31. \$0.45.

British authors of the nineteenth century. Edited by STANLEY J. KUNITZ and HOWARD HAYCRAFT. New York: H. W. Wilson, 1936. Pp. 677. \$5.00.

Chart of suggested classification of library positions in municipal libraries in New Jersey. Prepared by ETHEL M. FAIR. Distributed free to libraries of New Jersey; for others, \$0.50, postpaid. Requests to be addressed to Sarah B. Askew, Librarian, Public Library Commission, State House, Trenton, New Jersey.

Costume index. A subject index to plates and to illustrated text. Edited by ISABEL MONRO and DOROTHY E. COOK. New York: H. W. Wilson, 1937. Pp. x+338. Sold on service basis.

The geographical review, Vol. XXVII (April, 1937), No. 2. New York: American Geographical Society. Pp. 177-352. \$1.25.

History of civilization: earlier ages. By JAMES HARVEY ROBINSON, JAMES HENRY BREASTED, and EMMA PETERS SMITH. Boston: Ginn, 1937. Pp. xx+896. \$2.20.

History of civilization: our own age. By CHARLES A. BEARD, JAMES HARVEY ROBINSON, and DONNAL V. SMITH. Boston: Ginn, 1937. Pp. xiv+850. \$2.20.

Hollywood's movie commandments. A handbook for motion picture writers and reviewers. By OLGA J. MARTIN. New York: H. W. Wilson, 1937. Pp. 301. \$2.75.

How to interpret social work. A study course. By HELEN CODY BAKER and MARY SWAIN ROUTZAHN. New York: Russell Sage Foundation, 1937. Pp. 79. \$1.00.

Libraries and lyceums. By FRANK L. TOLMAN. (Reprinted for the School of Library Service, Columbia University, from the *History of the state of New York*, Vol. IX.) New York: Columbia University Press, 1937. Pp. 47-91. \$0.50 a copy; three copies, \$1.00; ten copies, \$2.50.

Libraries and the public. By LIONEL R. McCOLVIN. ("Practical library handbooks," No. 3.) London: George Allen & Unwin, 1937. Pp. 126. 5s.

Memelgebiet und Baltische Staaten. Eine Bibliographie mit besonderer Berücksichtigung von Politik und Wirtschaft, 1935-1936, mit Nachträgen aus den Jahren 1931 bis 1934. Band I, No. 1 (April, 1936). Herausgegeben von FRITZ PRINZHORN. Danzig, 1936. DG. 15.

[National Occupational Conference pamphlets.] *An appraisal and abstract of available literature on:* [1] *Linotype operation as an occupation* by DE WITT S. MORGAN; [2] *The occupation of the barber* by A. E. SCHOETTLER; [3] *The occupation of the insurance salesman* by SIGMUND ADLER; [4] *The occupation of the motion picture actor* by SHIRLEY WELLS; [5] *Pharmacy as an occupation* by IRVIN S. NOALL; [6] *Photography as an occupation* by MAYNARD L. SANDELL; [7] *Teaching as an occupation* by MARGUERITE G. HEALY and MARIE McNAMARA; [8] *Waiters and waitresses* by JOHN F. MURPHY. New York: National Occupational Conference, 1937. Pp. ca. 8 to each pamphlet. \$0.10 each.

The nature of a liberal college. By HENRY M. WRISTON. Appleton, Wis.: Lawrence College Press, 1937. Pp. xii+177. \$1.75, postpaid.

The philosophy of Fascism. By MARIO PALMIERI. Chicago: Dante Alighieri Society, 1936. Pp. 261. \$2.50.

Le Prêt international des livres et manuscrits. Par MARCEL GODET. ("Publications de l'Association des Bibliothécaires suisses.") Berne: Bibliothèque nationale suisse, 1937. Pp. 31.

Sborník věnovaný oslavě L. J. Zivného. Praha, 1937. Pp. 240.

Shakespeare biography. And other papers chiefly Elizabethan. By FELIX E. SCHELLING. Philadelphia: University of Pennsylvania Press, 1937. Pp. x+143. \$1.50.

Sporting books in the Huntington Library. Compiled by LYLE H. WRIGHT. ("Huntington Library lists," No. 2.) San Marino, Calif.: Huntington Library, 1937. Pp. ix+132. \$1.25, postage \$0.15.

Technique of underwater gymnastics. A study in practical application. By CHARLES LEROY LOWMAN, et al. Los Angeles: American Publications, Inc., 1937. Pp. xvi+276.

The wonderful wonders of one-two-three. By DAVID EUGENE SMITH. New York: McFarlane Warde McFarlane, 1937. Pp. 64. \$1.00.

Woodside does read! A survey of the reading interests and habits of a local community. Conducted under the auspices of the QUEENS BOROUGH PUBLIC LIBRARY by GRACE O. KELLEY. Jamaica, N.Y.: Queens Borough Public Library, 1935. Pp. xiv+244 (mimeographed).



